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Data for March 1976–February 1976 & Miscellanea

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NO. 385 SEPTEMBER 1976

Part II (Comprehensive Reports)

DATA FOR
MARCH 1976
FEBRUARY 1976
& MISCELLANEA

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO

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No. 385

Issued in two parts

Hope I. Leighton, Editor

J. Virginia Lincoln, Director
Solar - Terrestrial Data Services Division

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F.1f	Cosmic Ray Neutron Counts (Calgary)	374A108	375A 96	376A106	377A103	378A104	380E 28	381B 44	381A118	382A101	383A104	384A 96	385A101	
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Note: A = Part I, B = Part II.

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MARCH 1976 DATA

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Hα SOLAR FLARES

MARCH 1976

OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IMPOR-TANCE	OBS.		MEASUREMENTS			REMARKS
	DATE MAR	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
	02	1650	1737	NO FLARE PATROL													
	02	1748	1807	NO FLARE PATROL													
	02	1828	1910	NO FLARE PATROL													
	02	1937	1944	NO FLARE PATROL													
	02	1956	2059	NO FLARE PATROL													
	02	2114	2220	NO FLARE PATROL													
	03	0508	0510	NO FLARE PATROL													
	03	1735	1742	NO FLARE PATROL													
	03	1751	1830	NO FLARE PATROL													
	03	1842	1909	NO FLARE PATROL													
	03	1921	1936	NO FLARE PATROL													
	03	1953	1959	NO FLARE PATROL													
	03	2004	2040	NO FLARE PATROL													
	03	2051	2105	NO FLARE PATROL													
	03	2109	2126	NO FLARE PATROL													
	03	2129	2135	NO FLARE PATROL													
	04	1632	1657	NO FLARE PATROL													
	04	1810	1814	NO FLARE PATROL													
	04	1820	2220	NO FLARE PATROL													
	06	0658	0703	NO FLARE PATROL													
	06	0712	0729	NO FLARE PATROL													
	06	0858	0902	NO FLARE PATROL													
	06	0930	0950	NO FLARE PATROL													
	06	1002	1026	NO FLARE PATROL													
	06	1030	1034	NO FLARE PATROL													
	06	1044	1058	NO FLARE PATROL													
GRP63167	07	0634	0637+2	0653	S04	W51	.775	14118	3.4	19	-F		C		70	1.1	DJK
ABST	07	0634	0639	0701	S04	W52	.786	14118	3.4	27	-F		C	0639	87	1.4	DJK
CULG	07	0637E	0637U	0645	S05	W50	.763	14118	3.5	80	-F		P	0637	50	.8	
168 ABST	07	0740	0744	0810	S04	W50	.764	14118	3.6	30	-F		C	0744	131	1.9	E
169 ARCE	07	0939	0941	0943	S05	E52	.785	14116	11.3	4	-F		C	0941	27	.5	H
170 ABST	08	0710	0716	0725	S04	W60	.864	14118	3.8	15	-F		C	0716	87	1.7	EK
171 BOUL	08	2201	2215	2240	S33	E42	.727	14120	12.1	39	-F	2	C	2215	42	.6	
172 ABST	09	0729	0731	0745	S34	E40	.714	14120	12.3	16	-F		C	0731	44	.8	DJ
173 BOUL	09	2055	2057	2103	S04	W82	.989	14118	3.7	8	-F	2	C	2057	10	.4	
174 ABST	11	0641	0644	0700	S33	E14	.483	14120	12.3	19	-F		C	0644	87	1.0	D
	11	2146	2153	NO FLARE PATROL													
	11	2207	2215	NO FLARE PATROL													
	12	0457	0458	NO FLARE PATROL													
175 ABST	13	1044E	1046	1056D	S34	W15	.503	14120	12.3	120	-F		P	1046	87	1.0	E
	13	1210	1218	NO FLARE PATROL													
	13	1258	1348	NO FLARE PATROL													
	13	1451	1510	NO FLARE PATROL													
	13	1646	1713	NO FLARE PATROL													
	13	1731	1920	NO FLARE PATROL													
GRP63176	14	1830+6	1836+3	1848	S34	W31	.632	14120	12.4	18	-N				40	.5	
RAMY	14	1830	1839	1848	S35	W31	.640	14120	12.4	18	-N	4	C		41		DE
BOUL	14	1832	1839	1848	S35	W31	.640	14120	12.4	16	-N	1	C	1839	42	.5	
RAMY	14	1833E	1839	1848	S34	W30	.623	14120	12.5	150	-N	4	V		48		DE
PALE	14	1836	1836	1846	S34	W33	.650	14120	12.3	10	-F	3	C		29		
	15	0820	0842	NO FLARE PATROL													
177 CULG	16	0156	0158	0203	S35	W49	.797	14120	12.4	7	-F		C	0158	30	.5	
GRP63178	16	0908E	0923	1030D	N05	E41	.678	14127	19.5	82	-N						E
KHAR	16	0908E		1030D	N06	E42	.694	14127	19.5	820	-F		C		90	1.3	E
KHAR	16	0908E		1030D	N04	E43	.699	14127	19.6	820	-F						
KHAR	16	0923E	0923	0930D	N05	E40	.666	14127	19.4	70	-N		C		100	1.5	D
179 KHAR	16	1120E		1200D	N07	E41	.685	14127	19.5	400	-F		C		100	1.5	DH
	16	1258	1310	NO FLARE PATROL													
180 HTPR	17	1442	1444	1447	N06	E26	.486	14127	19.6	5	-F		C	1444	10	.1	

Note: Although these flare listings give all reported events, not all possible brightenings are reported. Thresholds of reporting vary from observatory to observatory.

Hα SOLAR FLARES

MARCH 1976

OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IMPOR-TANCE	OBS		MEASUREMENTS			REMARKS
	DATE 1976 MAR	START	MAX PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
181 HTPR	17	1558	1603	1628	N06	E25	.472	14127	19.5	30	-F		C	1603	30	.3	E
GRP63182	17	1748	1753 1800	1805D	S07	E28	.466	14134	19.8	17	-F						
BOUL	17	1748	1753	1803D	S08	E28	.466	14134	19.8	15D	-F	2	P	1753	21	.2	
RAMY	17	1753E	1800	1805D	S07	E28	.466	14134	19.8	12D	-F	4	C		45		
183 MCMA	17	1814E		1820D	S07	E27	.451	14134	19.5	6D	-F		P	1814	20	.2	D
184 MCMA	17	1833E		1833D	N05	E22	.424	14127	19.4		-F		P	1833	30	.3	DH
185 MCMA	17	1922E		1940D	N05	E24	.452	14127	19.6	18D	-F		P	1938	40	.4	E
186 MCMA	17	2004		2008D	N05	E25	.465	14127	19.7	4D	-F		F	2008	50	.5	E
187 HTPR	18	0642	0646	0657	N06	E18	.378	14127	19.6	15	-F		C	0646	20	.2	E
188 HTPR	18	0702	0715	0739	N06	E17	.365	14127	19.6	37	-F		C	0715	20	.2	E
GRP63189	18	1104	1107+1	1117	N06	E11	.294	14127	19.3	13	-F				45	.5	
RAMY	18	1104	1108	1116	N06	E11	.294	14127	19.3	12	-F	3	C		36		DE
RAMY	18	1106E	1107U	1117D	N06	E12	.305	14127	19.4	11D	-F	3	V		48		DE
GRP63190	18	1411+1	1412+2	1425	N06	E10	.284	14127	19.3	14	-F				30	.3	FH
RAMY	18	1411	1414	1424	N06	E09	.274	14127	19.3	13	-F	4	C		45		F H
HTPR	18	1412	1413	1425	N06	E10	.284	14127	19.3	13	-F		C	1413	20	.2	E
RAMY	18	1412E	1412U	1418D	N06	E10	.284	14127	19.3	6D	-F	4	V		32		F H
191 RAMY	18	1521E	1522	1526	N05	E11	.281	14127	19.5	5D	-F	4	V		90		F
192 HTPR	18	1535	1536	1544	N06	E10	.284	14127	19.4	9	-F		C	1536	10	.1	E
193 RAMY	18	1718E	1723	1732	N05	E10	.270	14127	19.5	14D	-F	4	C		72		F
194 RAMY	18	1833	1835	1836D	N04	E09	.247	14127	19.4	5D	-F	4	C		45		F
	18	1838	1920	NO FLARE PATROL													
	18	1932	2140	NO FLARE PATROL													
195 MANI	19	0042E	0042	0049	N04	E03	.199	14127	19.3	7D	-F	3	P	0042	20	.2	H
196 ABST	19	0651E	0651	0700D	N07	E02	.246	14127	19.4	9D	-N		P	0651	87	.9	D
197 ARCE	19	0945E		0958	N04	W02	.195	14127	19.3	13D	-F		C	0945	34	.4	
198 HTPR	19	1245	1248	1253	N05	W07	.241	14127	19.0	8	-F		C	1248	10		
199 HTPR	19	1310	1311	1318	N05	W09	.260	14127	18.9	8	-F		C	1311	20		
200 ATHN	20	0754E	0754U	0803	N03	W18	.352	14127	19.0	9D	-N	4	C		19		DE
201 ATHN	20	1003	1005	1019	N03	W19	.366	14127	19.0	16	-N	4	C		48		DE H
202 ATHN	20	1246	1247	1254	N04	W20	.388	14127	19.0	8	-F	4	C		48		DE
203 HTPR	20	1356	1400	1408	N05	W20	.396	14127	19.1	12	-F		C	1400	20		E
204 HTPR	20	1425		1429	N03	W20	.380	14127	19.1	4	-F		C	1428	30		E
GRP63205	20	1435	1438 1453	1456	N03	W20	.380	14127	19.1	21	-F				50	.5	R
ATHN	20	1435	1438	1456	N04	W20	.388	14127	19.1	21	-N	3	C		32		DE
HTPR	20	1436E		1457	N03	W20	.380	14127	19.1	21D	-F		C	1436	20		E
RAMY	20	1449E	1453	1456	N04	W21	.402	14127	19.0	7D	-F	3	C		40		F R
CATA	20	1450E	1450	1450D	N02	W21	.388	14127	19.0		-N	1		1450	56	.6	
	20	1744	1750	NO FLARE PATROL													
206 BOUL	20	1752	1757	1815	N02	W22	.403	14127	19.1	23	-N	2	C	1757	32	.3	
207 BOUL	20	1840	1849	1903	N05	W21	.410	14127	19.2	23	-F	2	C	1849	42	.5	
208 BOUL	20	2006	2018	2039	N18	W22	.547		19.2	33	-F	2	C	2018	32	.3	
209 CULG	20	2132	2134	2138	N04	W25	.458	14127	19.0	6	-F		C	2134	20	.2	

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DATE 1976 MAR	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		CONF.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
GRP63210	20	2144+7	2152+3	2216	N03	W24	.438	14127	19.1	32	-N				60	.7	
CULG	20	2144	2152	2215	N03	W25	.452	14127	19.0	31	-F		C	2152	50	.5	
BOUL	20	2146	2153	2222	N02	W25	.447	14127	19.0	36	-N	2	C	2153	64	.7	
RAMY	20	2151	2155	2201D	N04	W23	.430	14127	19.2	100	-N	3	V		90		FDE
RAMY	20	2151	2155	2216	N03	W24	.438	14127	19.1	25	-N	2	C		56		FDE
	20	2247	2254	NO FLARE PATROL													
211 CULG	21	0040	0043	0105	S07	W13	.223	14134	20.1	25	-F		C	0043	50	.5	
GRP63212	21	0128+2	0140+3	0202	N03	W26	.467	14127	19.1	34	-N				110	1.2	DHU
PALE	21	0128	01413	02070	N04	W23	.430	14127	19.3	390	-B	3	C		147		U H
CULG	21	0129	0143	0157	N02	W27	.476	14127	19.0	28	-N		C	0143	60	.7	
MITK	21	0130	0141	0154	N04	W26	.472	14127	19.1	24	-B		C	0141	110	1.3	D
KODA	21	0140E	0140	0209	N04	W28	.501	14127	19.0	280	-N		V	0155	144	1.5	DH
213 MITK	21	0203	0206	0215	N02	W27	.476	14127	19.1	12	-N		C	0206	110	1.3	D
GRP63214	21	0502	0505	0532	N04	W26	.472	14127	19.3	30	-N						FH
ATHN	21	0502	0505	0532	N04	W27	.487	14127	19.2	30	-N	3	C		48		F H
MANI	21	0514E	0514U	0525D	N04	W26	.472	14127	19.3	11D	-N	1	P	0514	50	.6	F
215 CULG	21	0651	0653	0658	N04	W26	.472	14127	19.3	7	-F		C	0653	20	.2	
GRP63216	21	0750	0800+5	0835	N04	W29	.515	14127	19.2	45	1B						HKU
KODA	21	0750	0805	0900	N04	W31	.542	14127	19.0	70	1B		V	0750			CEH
ATHN	21	0756E	0800	0835	N04	W28	.501	14127	19.2	390	-B	4	C		159		U
ARCE	21	0801E		0835	N04	W28	.501	14127	19.2	340	1N		C	0809	251	3.0	KFT
GRP63217	21	0949	0951	1004	N04	W26	.472	14127	19.5	15	-N						F
ATHN	21	0949	0951	1004	N04	W23	.430	14127	19.7	15	-N	3	C		64		F
ARCE	21	0950E		0958D	N04	W30	.529	14127	19.2	8D	-N		F	0958	43	.5	
GRP63218	21	1016E		1032D	N03	W31	.538	14127	19.1	16	-F				30	.4	E
HTPR	21	1016E		1032D	N02	W31	.533	14127	19.1	160	-F		C	1016	20		
UPIC	21	1022E		1025U	N03	W33	.565	14127	19.0	3D	-F		P	1022	41		
HTPR	21	1030		1032D	N04	W28	.501	14127	19.3	2D	-F		C	1031	20		E
	21	1111	1130	NO FLARE PATROL													
	21	1135	1230	NO FLARE PATROL													
	21	1232	1239	NO FLARE PATROL													
	21	1241	1306	NO FLARE PATROL													
GRP63219	21	1306E	1310	1323D	N03	W33	.565	14127	19.1	17	-N				110	1.3	
ABST	21	1306E	1310	1310D	N03	W35	.593	14127	18.9	4D	-N		P	1310	131	1.6	D
HTPR	21	1310E		1323D	N03	W32	.552	14127	19.1	13D	-B		C	1310	100	1.1	E
	21	1323	1325	NO FLARE PATROL													
GRP63220	21	1357+1	1405	1447	N06	W28	.512	14127	19.5	50	-F				20	.2	
			1413														
ZURI	21	1357	1413	1447	N07	W29	.532	14127	19.4	50	-F		C	1413	71	.9	
BOUL	21	1358	1405	1412D	N05	W29	.520	14127	19.4	14D	-F	1	P	1405	21	.2	
HTPR	21	1408		1413D	N06	W27	.499	14127	19.6	5D	-F		C	1410	10		
221 ZURI	21	1513	1515	1517	N03	W35	.593	14127	19.0	4	-N		C	1515	122	1.6	
222 HTPR	21	1558	1558	1609	N03	W28	.495	14127	19.6	11	-F		C	1558	20		E
	21	1759	1823	NO FLARE PATROL													
GRP63223	21	1829+9	1845+2	1924	N03	W34	.579	14127	19.2	55	-B				110	1.3	HU
PALE	21	1829	1845	1917	N04	W32	.556	14127	19.4	48	-B	3	C		180		U H
BOUL	21	1838	1847	1930	N01	W36	.599	14127	19.1	52	-B	1	P	1847	149	1.9	
RAMY	21	1843E	1845	1847D	N03	W35	.593	14127	19.2	4D	-B	3	V		78		FDE
RAMY	21	1843E	1845	1847D	N03	W35	.593	14127	19.2	4D	-B	3	C		78		FDE
224 PALE	21	1930	1931U	1935D	N05	W31	.547	14127	19.5	5D	-F	3	C		21		
	21	2148	2203	NO FLARE PATROL													
GRP63225	21	2228+3	2231+4	2255	N03	W37	.619	14127	19.2	27	-N				60	.8	E
BOUL	21	2228	2231	2245D	N02	W37	.616	14127	19.2	17D	-N	1	P	2233	42	.5	
CULG	21	2230	2234	2255	N03	W38	.632	14127	19.1	25	-F		C	2234	40	.5	
PALE	21	2231	2234	2236D	N04	W35	.597	14127	19.3	5D	-N	2	C		90		DE
VORO	21	2231	2235	2313	N03	W38	.632	14127	19.1	42	1N		C	2235	170	2.2	E

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IMPOR-TANCE	OBS.		MEASUREMENTS			REMARKS
	DATE 1976 MAR	START	MAX. PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
GRP63226	21	2259+0	2301+1	2308	N04	W36	.610	14127	19.3	9	-N				40	.5	D
VORO	21	2259	2302	2308D	N06	W36	.619	14127	19.3	9D	-B		C	2302	116	1.5	D
BOUL	21	2259	2301	2310	N03	W35	.593	14127	19.3	11	-F	1	C	2301	42	.5	
CULG	21	2301E	2302	2307	N04	W36	.610	14127	19.3	6D	-F		P	2302	40	.5	
227 VORO	21	2353	2354	2358	N02	W42	.680	14127	18.8	5	-B		C	2354	54	.8	D
228 MANI	22	0121E	0125U	0127D	N04	W41	.674	14127	19.0	6D	-F	2	P	0125	40	.6	F
GRP63229	22	0427E	0428+3	0436	N03	W41	.671	14127	19.1	9	-N						E
CULG	22	0427E	0428	0431D	N02	W42	.680	14127	19.0	4D	-N		P	0428	50	.7	
KODA	22	0430E	0431	0436	N05	W41	.677	14127	19.1	6D	-N		V	0430			E
230 ABST	22	0646	0649	0653	N07	W39	.661	14127	19.4	7	-F		C	0649	70	.9	D
GRP63231	22	0800>9	0806	0830	N03	W43	.695	14127	19.1	30	-N				110	1.5	
			0812+3														
ZURI	22	0800	0812	0814D	N02	W43	.693	14127	19.1	14D	-B		P	0812	122	1.7	
ABST	22	0802	0806	0830	N04	W44	.710	14127	19.0	28	-N		C	0806	87	1.3	D
BUCA	22	0809		0905	N02	W42	.680	14127	19.2	56	-B		C	0814	107	1.5	
KODA	22	0812	0815	0824	N05	W43	.702	14127	19.1	12	-N		V	0812			E
232 ABST	22	0832	0842	0912	N07	W45	.732	14127	19.0	40	-F		C	0842	131	1.9	JKZ
GRP63233	22	2156	2203	2237	N03	W51	.787	14127	19.1	41	-N				90	1.5	EU
PALE	22	2156	2203	2221	N04	W48	.756	14127	19.3	25	-N	3	C		102		U
CULG	22	2212E	2212	2228D	N03	W53	.807	14127	19.0	16D	-N		P	2212	60	1.0	
BOUL	22	2213E	2213E	2245	N03	W52	.797	14127	19.0	32D	-N	2	P	2213	85	1.4	
VORO	22	2217E		2254	N04	W53	.809	14127	19.0	37D	1N		C	2218	125	2.2	E
GRP63234	23	0114	0119	0135	N02	W54	.815	14127	19.0	21	-N				60	1.0	D
CULG	23	0114	0119	0147	N03	W55	.827	14127	18.9	33	-F		C	0119	40	.7	
VORO	23	0115E		0133	N02	W54	.815	14127	19.0	18D	-B		C	0117	99	1.7	D
MITK	23	0124		0135	N02	W54	.815	14127	19.0	11	-F		C	0124	60	1.1	D
235 MITK	23	0616		0628	N02	W57	.844	14127	19.0	12	-N		C	0616	90	1.7	D
236 TEHR	23	0837	0839	0841	S05	E90	1.000	14143	30.1	4	-B	3	C		80		
GRP63237	23	0907+1	0915+0	0945	S07	E90	1.000	14143	30.1	38	-N				30		
TEHR	23	0907	0915	0945	S06	E90	1.000	14143	30.1	38	-N	3	C		35		
HTPR	23	0908	0915	0935	S07	E90	1.000	14143	30.1	27	-N		C	0915	20		
UPIC	23	0917E		1046D	S09	E90	1.000	14143	30.1	89D	1B		P	0932			
238 HTPR	23	1027		1033D	N04	W58	.856	14127	19.1	6D	-F		C	1029	20	.3	
	23	1057	1104	NO FLARE PATROL													
239 HTPR	23	1539		1544D	N04	W61	.882	14127	19.1	5D	-F		C	1541	10	.2	
240 MCMA	23	1718	1721	1730	N03	W64	.904	14127	18.9	12	-N		C	1721	40	1.0	DH
241 BOUL	23	2237	2238	2258	S00	W65	.908	14127	19.1	21	-F	2	C	2238	21	.5	
GRP63242	24	0011+6	0018+2	0043	N02	W66	.917	14127	19.1	32	1N				90		
BOUL	24	0011	0020	0027D	N01	W66	.916	14127	19.1	16D	1B	2	C	0020	85	2.1	
VORO	24	0015	0018	0041	N02	W67	.924	14127	19.0	26	1N		C	0018	197	5.0	E
MANI	24	0017	0019	0036D	N02	W67	.924	14127	19.0	19D	1N	3	P	0019	100	2.1	
MITK	24	0017	0020	0045	N02	W65	.910	14127	19.1	28	-B		C	0020	90	1.9	D
243 MANI	24	0515E	0515U	0516D	N02	W71	.948	14127	18.9	1D	-F	3	P	0515	10	.2	
244 HTPR	24	0914		0939D	N07	W70	.947	14127	19.1	25D	-F		C	0928	20	.4	E
245 HTPR	24	1021	1022	1025	N03	W70	.943	14127	19.2	4	-F		C	1022	10	.2	
246 HTPR	24	1032	1034	1040	N07	W70	.947	14127	19.2	8	-F		C	1034	10	.2	
	24	1146	1157	NO FLARE PATROL													
247 HTPR	24	1209	1211	1221	N07	W72	.957	14127	19.1	12	-F		C	1211	20	.2	
GRP63248	24	1334+2	1340+3	1346	S09	E83	.990	14143	30.8	12	-F				70		E
ZURI	24	1334	1340	1344	S11	E85	.994	14143	30.9	10	-F		C	1340	81		
HTPR	24	1336	1343	1348	S08	E82	.988	14143	30.7	12	-N		C	1343	70		E
249 HTPR	24	1433	1438	1444	S08	E81	.985	14143	30.7	11	-N		C	1438	30		E

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IMPOR-TANCE	OBS		MEASUREMENTS			REMARKS
	DATE 1976 MAR	START	MAX PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		CONG.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
250 ZURI	24	1502	1506	1508	S11	E85	.994	14143	31.0	6	-F		C	1506	51		
251 MCMA	24	1900	1903	1913	S11	E85	.994	14143	31.2	13	-F		C	1903			E
252 BOUL	24	2028	2032	2048	S11	E77	.970	14143	30.5	20	-F	1	C	2032	21	.7	
253 MANI	25	0019	0023	0025	N04	W80	.987	14127	19.3	6	-F	2	C	0023	30	.8	
	25	0500	0544	NO FLARE PATROL													
GRP63254	25	0612+2	0615+1	0621	S06	E83	.991	14143	31.5	9	-F						D
ABST	25	0612	0616	0622	S05	E88	.999	14143	31.9	10	1F		P	0616	87		D
MANI	25	0614	0615	0619	S08	E78	.975	14143	31.1	5	-F	2	C	0615	30	.8	
255 ATHN	25	0703	0704	0709	N03	W88	1.000	14127	18.7	6	-N	2		0704			
256 MANI	25	0704	0707	0714	S05	E76	.968	14143	31.0	10	-F	2	C	0707	40	1.0	
257 HTPR	25	0725E		0744	S06	E73	.954	14143	30.8	190	-F		C	0728	20	.5	
258 HTPR	25	0822	0825	0838	S06	E73	.954	14143	30.8	16	-F		C	0825	20	.5	
GRP63259	25	0914+5	0926+1	0941	S06	E74	.959	14143	30.9	27	-F				45		E
HTPR	25	0914	0926	0942	S05	E72	.949	14143	30.8	28	-F		C	0926	30	.7	E
MONT	25	0922	0927	0939	S07	E76	.967	14143	31.1	17	-N		C	0927	60		E
GRP63260	25	1154+5	1201+5	1229	S06	E75	.963	14143	31.1	35	-N				40		FHKW
MONT	25	1154	1201	1219	S07	E75	.963	14143	31.1	25	-F		C	1201	40		
ATHN	25	1159	1202	122 90	S06	E74	.959	14143	31.0	300	-N	2		1202	33	1.3	
MCMA	25	1203E	1206	13000	S06	E75	.963	14143	31.1	570	1B		C	1226	100	2.4	FHKTW
MCMA	25	1203E		13000	S06	E75	.963	14143	31.1	570	1B		C	1206	60		
MCMA	25	1203E		13000	S06	E75	.963	14143	31.1	570	1B		C	1246	120		
GRP63261	25	1305+5	1325+4	1430	S05	E69	.931	14143	30.7	85	1N				120		FHLWX
MCMA	25	1305	1325	1430	S05	E71	.943	14143	30.9	85	1B		C	1325	125	3.7	FHLWX
CATA	25	1310	1320	13200	S06	E68	.924	14143	30.6	100	1N	1		1320	168		
BOUL	25	1322E	1329	1343D	S05	E67	.918	14143	30.6	210	1N	1	C	1329	96	2.4	
ATHN	25	1326E	1326	14140	S05	E72	.949	14143	31.0	480	-N	2		1326	82	3.3	
GRP63262	25	1636	1649	18300	S05	E68	.925	14143	30.8	114	-N						HK
MCMA	25	1636	1649	18300	S05	E68	.925	14143	30.8	1140	-N		C	1649	60	1.8	HK
MCMA	25	1636		18300	S05	E68	.925	14143	30.8	1140	-N		C	1701			
263 MCMA	25	1909	1917	1924	S05	E67	.918	14143	30.8	15	-N		C	1917	40	1.0	DH
264 MCMA	25	2039	2041	2053	S05	E67	.918	14143	30.9	14	-F		C	2041	40	1.0	E
	25	2244	2259	NO FLARE PATROL													
265 MANI	25	2310E	2312U	2318D	S07	E67	.917	14143	31.0	80	-F	2	V	2312	40	.8	
266 MANI	26	0001	0004	0011	S05	E64	.896	14143	30.8	10	-F	3	P	0004	30	.6	
267 KODA	26	0144	0154	0212	S05	E62	.880	14143	30.7	28	-N		V	0144			DH
268 KODA	26	0233	0250	0337	S05	E67	.918	14143	31.1	64	-B		V	0233			DH
GRP63269	26	0656+3	0658+2	0711	S05	E61	.872	14143	30.9	15	-N						DJZ
ABST	26	0656	0658	0712	S03	E62	.882	14143	30.9	16	1F		P	0658	131	2.8	JZ
HTPR	26	0659	0700	0710	S07	E60	.862	14143	30.8	11	-N		C	0700	10	.2	D
GRP63270	26	0715+4	0717 0721+2	0739	S06	E65	.903	14143	31.2	24	-B						DHJZ
MANI	26	0715	0717	0720	S08	E59	.852	14143	30.7	5	-F	3	P	0717	20	.4	
ABST	26	0718	0721	0742	S03	E70	.938	14143	31.6	24	2N		C	0721	131		DJZ
HTPR	26	0719	0721	0803	S08	E65	.902	14143	31.2	44	-B		C	0721	50	1.0	
MANI	26	0721	0723	0735	S06	E64	.895	14143	31.1	14	-B	3	P	0723	100	2.0	
KODA	26	0725E	0725	0730	S05	E65	.904	14143	31.2	50	-B		V	0725			DH
271 HTPR	26	0758	0759	0807	S08	E60	.861	14143	30.8	9	-N		C	0759	10	.2	D
GRP63272	26	0830+3	0837+3 0855	0858	S09	E59	.852	14143	30.8	28	-N						EH
HTPR	26	0830	0838	0855	S10	E60	.860	14143	30.9	25	-N		C	0838	30	.6	
MONT	26	0831	0837	0858	S08	E60	.861	14143	30.9	27	-B		C	0837	150		E
MANI	26	0833	0840	0858	S08	E58	.843	14143	30.7	25	-N			0840	90	1.6	
MANI	26	0833	0836	0858	S08	E58	.843	14143	30.7	25	-F	3	V	0836	30	.5	H
HTPR	26	0839	0855	0930	S13	E57	.833	14143	30.6	510	-F		C	0855	20	.4	

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IMPOR-TANCE	OBS		MEASUREMENTS			REMARKS
	DATE	START	MAX PHASE	END	APPROX LAT	APPROX MER DIST	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP DAY	MIN		COND	TYPE	TIME UT	MEAS AREA Mill. of Disk	CORR AREA Sq Deg	
	1976 MAR																
273 HTPR	26	0932	0934	0941	S04	E64	.897	14143	31.2	9	-F		C	0934	30	.6	
274 MONT	26	1139	1141	1150	S04	E61	.873	14143	31.1	11	-F		C	1141	20		
GRP63275	26	1334+5	1341+4 1356+3	1401	S04	E61	.873	14143	31.1	27	-F				60	1.2	U
HTPR	26	1334	1345	1405	S06	E62	.879	14143	31.2	31	-N		C	1345	20	.4	
MONT	26	1336	1341	1354	S04	E60	.864	14143	31.1	18	-F		C	1341	40		E
RAMY	26	1338	1356	1403	S03	E60	.865	14143	31.1	25	-F	4	C		72		U F
ZURI	26	1339	1343	1401	S04	E63	.889	14143	31.3	22	-F		C	1343	82	1.9	
LOCA	26	1348E	1348	1355D	S03	E60	.865	14143	31.1	7D	-N		S	1349	92	1.7	
RAMY	26	1356E	1359	1409D	S03	E59	.856	14143	31.0	13D	-F	4	V		36		DE
GRP63276	26	1439+2	1441+6	1455	S08	E62	.878	14143	31.3	16	-N				80	1.7	FH
RAMY	26	1439	1447	1504	S08	E61	.870	14143	31.2	25	-B	4	C		108		F H
HTPR	26	1441	1443	1455	S08	E62	.878	14143	31.3	14	-N		C	1443	60	1.2	
ZURI	26	1441	1441	1453	S07	E62	.879	14143	31.3	12	-N		C	1441	61	1.3	
	26	1900	1910	NO FLARE PATROL													
277 BOUL	26	1944	1947	1958	S08	W26	.435	14147	24.9	14	-F	2	C	1946	10	.1	
278 MANI	26	2300E	2303	2311	S07	E51	.773	14143	30.8	11D	-F	3	P	2303	80	1.3	
GRP63279	27	0201+0	0204+0	0218	S07	E54	.805	14143	31.1	17	-N				90	1.5	
PALE	27	0201	0204	0222	S07	E51	.773	14143	30.9	21	-N	3	C		106		DE
MANI	27	0201	0204	0213	S08	E58	.843	14143	31.4	12	-N	3	P	0204	80	1.4	F
GRP63280	27	0318+6	0320+2 0328	0337	S07	E50	.762	14143	30.9	19	-N				100	1.6	HU
MANI	27	0318	0320	0333	S07	E48	.739	14143	30.7	15	-N	3	P	0320	100	1.5	F
PALE	27	0318	0322	0337	S07	E50	.762	14143	30.9	19	-N	2	C		101		U
KODA	27	0324	0328	0343	S07	E52	.784	14143	31.0	19	-B		V	0324			EH
281 MANI	27	0518	0522	0526	S07	E56	.825	14143	31.4	8	-F	3	P	0522	80	1.4	F
282 MANI	27	0550	0602	0610	S10	E48	.738	14143	30.8	20	-F	2	P	0602	20	.3	F
GRP63283	27	0626+3	0631+2	0641	S07	E52	.784	14143	31.2	15	-N				80	1.3	J
ABST	27	0626E	0632	0642	S04	E52	.786	14143	31.2	16D	-F		P	0632	87	1.5	EJ
MANI	27	0628E	0631	0640	S08	E52	.783	14143	31.2	12D	-N	3	P	0631	60	1.0	F
ATHN	27	0629	0631	0642	S10	E51	.772	14143	31.1	13	-N	3	C		80		F
MITK	27	0629	0633	0640	S08	E53	.794	14143	31.2	11	-N		C	0633	110	1.8	D
GRP63284	27	0720+3	0726+2	0738	S06	E53	.795	14143	31.3	18	-N				90	1.5	
MITK	27	0720	0727	0738	S05	E52	.785	14143	31.2	18	-B		C	0727	110	1.8	D
BUCA	27	0723	0728	0744	S07	E54	.805	14143	31.4	21	-N		C	0728	75	1.2	
MANI	27	0726E	0726U	0730	S06	E53	.795	14143	31.3	4D	-F	3	P	0726	80	1.3	F
GRP63285	27	1156+8	1206+9	1230	S10	E49	.749	14143	31.2	34	1N				140	2.1	U
HTPR	27	1156	1206	1240	S10	E49	.749	14143	31.2	44	-N		C	1206	120	1.7	
ATHN	27	1202	1208	1222	S10	E47	.726	14143	31.0	20	-B	3	C		95		U F
UPIC	27	1204	1211	1220U	S17	E48	.742	14143	31.1	16D	1N		P	1211	306		
CATA	27	1210E	1210	1215D	S08	E48	.738	14143	31.1	5D	1B	2		1210	168	2.6	
RAMY	27	1211E	1215U	1230D	S06	E50	.762	14143	31.3	19D	-N	3	V		120		FDE
RAMY	27	1225E	1225U	1230D	S11	E50	.761	14143	31.3	5D	-N	3	C		108		FDE
GRP63286	27	1428>9	1439+4	1455	S05	E48	.740	14143	31.2	27	-F				50	.7	
HTPR	27	1428	1440	1455	S05	E49	.752	14143	31.3	27	-F		C	1440	30	.4	
BOUL	27	1429	1439	1500	S06	E47	.728	14143	31.1	31	-N	2	C	1439	42	.6	
RAMY	27	1438	1441U	1451	S05	E47	.729	14143	31.1	13	-F	4	C		63		DE
RAMY	27	1440E	1443U	1450D	S04	E48	.741	14143	31.2	10D	-F	4	V		60		DE
287 BOUL	27	1803	1805	1824	S06	E46	.716	14143	31.2	21	-F	2	C	1805	21	.3	
288 BOUL	27	1938	1944	2000	S09	E46	.714	14143	31.3	22	-F	2	C	1944	21	.3	
GRP63289	27	2043	2048+0	2108	S07	E42	.665	14143	31.0	25	-N				60	.8	
RAMY	27	2043	2048	2108	S08	E42	.665	14143	31.0	25	-N	4	C		63		FDE
RAMY	27	2044E	2048	2108	S07	E42	.665	14143	31.0	24D	-N	4	V		64		FDE
GRP63290	27	2327+1	2331 2337+2	2357	S07	E43	.678	14143	31.2	30	-N						J
VORO	27	2327	2331	2334	S04	E44	.693	14143	31.3	7	1N		C	2331	179	2.5	EJ
CULG	27	2328	2339	2357	S07	E44	.690	14143	31.3	29	-N		C	2339	30	.4	
MANI	27	2333E	2337	2339D	S10	E42	.665	14143	31.1	6D	-F	2	P	2337	80	1.1	F
MANI	27	2353E	2355U	0000	S08	E43	.677	14143	31.2	7D	-F	2	P	2355	50	.7	F

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OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS		MEASUREMENTS			REMARKS
	DATE 1976 MAR	START	MAX PHASE	END	APPROX LAT.	APPROX MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		CONG	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
291 VORO	28	0003E		0024D	S08	E44	.690	14143	31.3	21D	-B		P	0011	143	2.0	E
292 MANI	28	0202	0204U	0215	N05	W45	.724	14146	24.7	13	-F	2	P	0204	30	.5	H
293 MANI	28	0357E	0403	0412	N06	W46	.739	14146	24.7	15D	-F	3	P	0403	30	.5	
GRP63294	28	0546+9	0556+9	0613	S07	E37	.598	14143	31.0	27	-B						FHJ
ABST	28	0546E	0558	0615	S05	E42	.667	14143	31.4	29D	-F		P	0558	44	.5	D
ABST	28	0548E	0556	0610D	S06	E34	.556	14143	30.8	22D	-N		P	0556	218	2.6	FJ
CULG	28	0551	0559	0610	S09	E34	.555	14143	30.9	19	-N		C	0558	60	.7	
MANI	28	0555	0558	0608D	S07	E34	.556	14143	30.8	13D	-B	3	P	0558	120	1.5	FH
KODA	28	0600E	0605	0611	S07	E42	.665	14143	31.4	11D	-B		P	0608	166	1.7	D
ATHN	28	0601E	0601	0605D	S06	E37	.599	14143	31.0	4D	-B	2		0601	98	2.1	
TEHR	28	0604E	0604U	0615	S09	E37	.598	14143	31.0	11D	-B	3	C		94		F H
GRP63295	28	0638>9	0652+0	0709	N06	W48	.761	14146	24.7	31	-F				40	.6	F
ABST	28	0638E	0652	0716D	N07	W49	.775	14146	24.6	38D	-F		P	0652	35	.6	F
MANI	28	0649	0652U	0701	N06	W48	.761	14146	24.7	12	-F	3	P	0652	40	.6	F
GRP63296	28	0922+8	0933 0946	1002	S08	E31	.511	14143	30.7	40	-N						F
ARCE	28	0922E		1002D	S08	E31	.511	14143	30.7	40D	1N		C	0947	208	2.5	F
HTPR	28	0928	0946	1004D	S09	E31	.512	14143	30.7	36D	-N		C	0946	30	.4	
ATHN	28	0930	0933	0947	S08	E32	.526	14143	30.8	17	-N	2		0933	66	1.4	
297 HTPR	28	1110	1120	1130	S08	E32	.526	14143	30.9	20	-N		C	1120	30	.3	E
GRP63298	28	1234+1	1237+2	1252	S06	E37	.599	14143	31.3	18	-B				60	.8	E
HTPR	28	1234	1237	1252	S07	E36	.584	14143	31.2	18	-B		C	1237	70	.8	E
MEUD	28	1235	1238	1247	S06	E36	.585	14143	31.2	12	-N		C	1238	70	.9	
MCMA	28	1235	1239	1300	S05	E38	.613	14143	31.4	25	-B		C	1239	50	.7	E
GRP63299	28	1342+1	1344+1	1353	S06	E37	.599	14143	31.3	11	-F				20	.3	D
HTPR	28	1342	1344	1353D	S07	E36	.584	14143	31.3	11D	-F		C	1344	10	.1	
MCMA	28	1343	1345	1353	S05	E38	.613	14143	31.4	10	-N		C	1345	25	.3	D
GRP63300	28	1534+4	1539+4	1555	S06	E27	.452	14143	30.7	21	-F				30	.3	
HTPR	28	1534	1539	1550	S06	E26	.436	14143	30.6	16	-F		C	1539	20	.2	E
RAMY	28	1535E	1540U	1545D	S07	E29	.482	14143	30.8	10D	-F	4	V		27		DE
MCMA	28	1538	1543	1600	S05	E26	.437	14143	30.6	22	-N		C	1543	25	.3	D
GRP63301	28	1623+2	1627+1	1632	N07	W52	.806	14146	24.8	9	-F				25	.4	DH
HTPR	28	1623	1627	1631	N07	W52	.806	14146	24.8	8	-F		C	1627	20	.3	
MEUD	28	1625	1628	1632	N07	W53	.815	14146	24.7	7	-F		C	1628	30	.5	DH
302 HTPR	28	1625	1631	1634	S06	E25	.420	14143	30.6	9	-F		C	1631	10	.1	
GRP63303	28	1739+1	1743+2	1805	S07	E27	.451	14143	30.8	27	-N				80	.9	
RAMY	28	1738	1743	1803	S07	E26	.435	14143	30.7	25	-N	4	C		80		FDE
MCMA	28	1739	1745	1825	S06	E26	.436	14143	30.7	46	-B		C	1745	100	1.2	F
RAMY	28	1742E	1745	1805D	S07	E28	.466	14143	30.8	23D	-N	4	V		64		FDE
GRP63304	28	1834+7	1843+2	1855	S07	E26	.435	14143	30.7	21	-N				60	.7	
RAMY	28	1834	1843	1853	S08	E26	.435	14143	30.7	19	-N	4	C		45		FDE
MCMA	28	1841	1845	1903	S05	E25	.421	14143	30.7	22	-N		C	1845	50	.6	E
RAMY	28	1842E	1844	1855D	S08	E26	.435	14143	30.7	13D	-N	4	V		80		FDE
GRP63305	28	1905E	1921+0 1932	2021D	S07	E28	.466	14143	30.9	76	1B				260	2.9	FLUXZ
RAMY	28	1905E	1921U	2017D	S07	E28	.466	14143	30.9	72D	1B	4	C		250		Z U
RAMY	28	1905E	1921D	1921D	S07	E28	.466	14143	30.9	16D	1B	4	V		250		Z U
RAMY	28	1912	1932	2021D	S07	E28	.466	14143	30.9	69D	1B	4	C		234		Z U
MCMA	28	1915	1940	2000D	S06	E27	.452	14143	30.8	45D	1B		C	1940	300	3.5	FLUXZ
PALE	28	1915	1929D	1929D	S07	E28	.466	14143	30.9	14D	1B	3	V		307		Z U
PALE	28	1915	1929D	1929D	S07	E28	.466	14143	30.9	14D	1B	3	C		235		Z U
GRP63306	28	2058	2100+1	2110	S07	E23	.388	14143	30.5	12	-N				60	.7	
RAMY	28	2058	2100	2109	S07	E23	.388	14143	30.5	11	-N	4	C		56		DE
RAMY	28	2059E	2101	2110D	S07	E23	.388	14143	30.6	11D	-N	4	V		64		DE
307 RAMY	28	2148	2157	2209	S05	E32	.528	14143	31.3	21	-F	4	C		45		
308 CULG	29	0415	0432	0447	S11	E19	.330	14143	30.6	32	-F		C	0432	40	.4	
GRP63309	29	0523E	0523+1	0537	S06	E19	.324	14143	30.6	14	-N				70	.7	F
CULG	29	0523E	0523	0550	S06	E20	.340	14143	30.7	27D	-N		P	0523	60	.6	
MANI	29	0523E	0524U	0524	S07	E19	.323	14143	30.6	1D	-N	2	V	0524	80	.9	F

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OBSERV-ATORY	OBSERVED UT				LOCATION					DURA-TION	IMPOR-TANCE	OBS.		MEASUREMENTS			REMARKS
	DATE 1976 MAR	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Millionths of Disk	CORR AREA Sq. Deg.	
310 HTPR	29	0900	0902	0910	N06	W63	.900	14146	24.6	10	-F		C	0802	20	.4	
GRP63311	29	0825>9	0840+0	0854	N06	W63	.900	14146	24.6	29	-F				20	.5	D
ARCE	29	0825	0840	0900	N06	W62	.892	14146	24.7	35	-F		C	0840	24	.5	D
HTPR	29	0837	0840	0848	N06	W64	.907	14146	24.6	11	-F		C	0840	20	.4	
GRP63312	29	0908+1	0910+1	0918	S06	E17	.291	14143	30.7	10	-F				30	.3	EL
HTPR	29	0908	0910	0915	S06	E18	.307	14143	30.7	7	-F		C	0910	20	.2	E
WEND	29	0908		0927	S06	E16	.274	14143	30.6	19	1N		V		300		L
MONT	29	0909	0911	0918	S07	E17	.290	14143	30.7	9	-F		C	0911	40		
313 MONT	29	0910	0913	0921	N07	W61	.886	14146	24.8	11	-F		C	0913	20		
314 ZURI	29	0942	0946	1004	N05	W62	.891	14146	24.8	22	-N		C	0946	71	1.7	
GRP63315	29	1040+5	1047+4	1114	S10	E23	.391	14143	31.2	34	-N				80	.9	EH
ZURI	29	1040	1050	1134	S12	E24	.411	14143	31.2	54	1N		C	1050	224	2.5	
HTPR	29	1042	1047	1122	S09	E23	.389	14143	31.2	40	-N		C	1047	60	.7	E
MONT	29	1043	1047	1117D	S11	E24	.408	14143	31.2	34D	-N		C	1047	110		E
RAMY	29	1043	1047	1057	S08	E20	.340	14143	30.9	14	-N	3	C		45		F
MEUD	29	1045	1049	1120	S10	E24	.406	14143	31.2	35	-F		C	1049	110	1.2	E
RAMY	29	1049E	1051	1057	S10	E22	.375	14143	31.1	8D	-F	3	V		48		H
GRP63316	29	1152>9	1221	1232	S09	E26	.436	14143	31.4	40	-F						EL
WEND	29	1152E		1240D	S11	E27	.454	14143	31.5	48D	1F		V		300		EL
HTPR	29	1218	1221	1224	S08	E25	.420	14143	31.4	6	-F		C	1221	70	.8	E
GRP63317	29	1237+3	1240+3	1253	S07	E16	.274	14143	30.7	16	-N				80	.8	
HTPR	29	1225	1240	1301	S07	E15	.257	14143	30.6	33	-N		C	1240	80	.8	E
MONT	29	1237	1240	1253	S08	E16	.274	14143	30.7	16	-B		C	1240	70		D
ZURI	29	1238	1240	1252	S08	E16	.274	14143	30.7	14	-N		C	1240	122	1.3	
MEUD	29	1240	1243	1253	S07	E16	.274	14143	30.7	13	-F		C	1243	60	.6	
318 HTPR	29	1329	1343	1410	S09	E23	.389	14143	31.3	41	-F		C	1343	20	.2	E
GRP63319	29	1701+3	1711+0	1717	S07	E17	.290	14143	31.0	16	-F				40	.4	
RAMY	29	1701	1711	1717	S07	E16	.274	14143	30.9	16	-F	3	C		36		FDE
HTPR	29	1704		1706D	S08	E18	.307	14143	31.1	2D	-F		C	1706	20	.2	E
RAMY	29	1710E	1711	1717	S07	E18	.307	14143	31.1	7D	-F	3	V		48		DE
GRP63320	29	1751	1754 1803	1808	S11	E21	.361	14143	31.3	17	-F						H
RAMY	29	1751	1754	1807	S11	E20	.346	14143	31.2	16	-F	3	C		63		DE H
RAMY	29	1759E	1803	1808D	S11	E22	.377	14143	31.4	9D	-F	3	V		60		DE H
	29	2048	2110	NO FLARE PATROL													
	29	2145	2202	NO FLARE PATROL													
	29	2205	2212	NO FLARE PATROL													
GRP63321	30	0353E	0401	0415	S09	E14	.243	14143	31.2	22	-N						D
CULG	30	0353E	0401	0417	S12	E15	.271	14143	31.3	24D	-N		P	0401	40	.4	
KODA	30	0403E	0403	0412	S07	E13	.223	14143	31.1	9D	-B		V	0403			D
322 MANI	30	0531E	0533U	0539	S07	E06	.104	14143	30.7	8D	-F	2	V	0533	60	.6	
323 ARCE	30 IMP.1	0910E NO	- ZURI2	0953D MONT2	N07	W81	.990	14146	24.3	43D	?F		C	0925	34		
GRP63324	30	1023+0	1024 1041	1057	S08	E06	.106	14143	30.3	34	-F						E
ZURI	30	1023	1049	1057D	S08	E06	.106	14143	30.9	34D	-F		F	1049	190	2.0	
KHAR	30	1023E	1024	1025D	S09	E06	.111	14143	30.9	2D	-F		C				D
KHAR	30	1027E		1153D	S06	E08	.139	14143	31.0	86D	-F		C				D
MONT	30	1037	1041	1050	S08	E04	.073	14143	30.7	13	-F		C	1041	40		E
GRP63325	30	1138+1	1141+1	1151	S07	E05	.087	14143	30.9	13	-F				40	.4	
MONT	30	1138	1141	1156	S08	E04	.073	14143	30.8	18	-F		C	1141	40		
RAMY	30	1139E	1141U	1151	S07	E05	.087	14143	30.9	12D	-F	4	V		48		DE
RAMY	30	1139	1142	1151	S07	E05	.087	14143	30.9	12	-F	4	C		36		
326 ZURI	30	1250	1250	1252	S08	E07	.123	14143	31.1	2	-N		C	1250	122	1.3	
GRP63327	30	1322+8	1332+3	1339	S08	E07	.123	14143	31.1	17	-F						
ZURI	30	1322	1332	1336	S08	E07	.123	14143	31.1	14	-N		C	1332	143	1.5	
BOUL	30	1329E	1334	1339	S08	E07	.123	14143	31.1	10D	-F	1	P	1334	42	.4	
LOCA	30	1330	1335	1345	S09	E06	.111	14143	31.0	15	1F		V	1335	224	2.3	

Hα SOLAR FLARES

MARCH 1976

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS		MEASUREMENTS			REMARKS
	DATE 1976 MAR	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR. AREA Sq. Deg.	
GRP63328	30	2100+6	2106+5	2116	S10	E05	.104	14143	31.2	16	-N				30	.3	D
CULG	30	2100	2106	2118	S12	E05	.127	14143	31.3	18	-N		C	2106	30	.3	
PALE	30	2101	2106	2112	S06	E03	.053	14143	31.1	11	-N	3	C		21		DE
RAMY	30	2101	2109	2115	S11	E05	.115	14143	31.3	14	-F	4	C		27		DE
MCMA	30	2106	2109	2117	S11	E06	.128	14143	31.3	11	-N		C	2109	20	.2	D
RAMY	30	2110E	2111U	2115	S10	E05	.104	14143	31.3	5D	-F	3	V		30		DE
GRP63329	30	2138+2	2142+1	2151	S11	00	.076	14143	30.9	13	-F				35	.4	L
CULG	30	2128	2142	2158	S12	E00	.093	14143	30.9	30	-N		C	2142	20	.2	
MCMA	30	2138	2143	2154	S11	E00	.076	14143	30.9	16	-N		C	2143	25	.3	DL
RAMY	30	2140	2143	2147	S10	E01	.061	14143	31.0	7	-F	2	V		45		FDE
RAMY	30	2140	2142	2147	S10	E01	.061	14143	31.0	7	-F	3	C		36		FDE
330 VORO	31	0104	0105	0110	S11	W02	.084	14143	30.9	6	-		V	0105	63	.6	DL
GRP63331	31	0155>9	0158+1 0206	0208	S09	E01	.045	14143	31.2	13	-F				60	.6	EHL
VORO	31	0155	0159D	0203D	S08	E02	.042	14143	31.2	8D	1		S	0159	314	3.2	EL
MANI	31	0156	0158	0207	S09	E02	.054	14143	31.2	11	-F	3	V	0158	40	.4	
PALE	31	0159	0159	0208D	S08	W03	.057	14143	30.9	9D	-F	3	C		63		HDE
CULG	31	0206	0206	0213	S12	E03	.107	14143	31.3	7	-F		P	0206	20	.2	
	31	0411	0416	NO FLARE PATROL													
332 MANI	31	0424E	0424U	0429D	N07	W90	1.000	14146	24.4	5D	-F	2	V	0424	50	1.7	
GRP63333	31	0424E	0424	0442	S11	W04	.103	14143	30.9	18	-F				40	.4	F
MANI	31	0424E	0424U	0429D	S11	W04	.103	14143	30.9	5D	-F	2	V	0424	50	.5	F
CULG	31	0426E	0426	0442	S12	W04	.116	14143	30.9	16D	-F		P	0426	30	.3	
GRP63334	31	0453	0458+2	0527	S07	W03	.052	14143	31.0	34	-N				80	.9	EHU
CULG	31	0453	0458	0507	S08	W04	.073	14143	30.9	14	-N		P	0458	70	.7	
ATHN	31	0456E	0458U	0527	S07	W03	.052	14143	31.0	31D	-N	1	C		80		U H
ABST	31	0457E	0500	0506D	S07	W03	.052	14143	31.0	9D	-N		P	0500	174	1.8	E
TACH	31	0506E		0540	S06	W04	.070	14143	30.9	34D	1N		P	0506	265	2.7	BEH
GRP63335	31	0703+2	0704+2	0714	S09	W01	.045	14143	31.2	11	-F						EJ
ABST	31	0703E	0704	0712	S09	W01	.045	14143	31.2	9D	-F		P	0704	131	1.3	EJ
CATA	31	0705E	0705	0715	S10	W01	.062	14143	31.2	10D	-N	1		0705	56	.6	
ATHN	31	0705	0706	0709	S09	W01	.045	14143	31.2	4	-N			0706	5		
UPIC	31	0706E	0706U	0715	S09	W01	.045	14143	31.2	9D	1F		P	0706	286		
336 MONT	31	0816	0819	0826	N05	W90	1.000	14146	24.6	10	-F		C	0819	20		D
337 MONT	31	0843	0847	0903	N05	W90	1.000	14146	24.5	20	-F		C	0847	20		D
338 MONT	31	0855	0857	0900	S10	W04	.091	14143	31.1	5	-F		C	0857	20		D
GRP63339	31	0946+4	1002+3	1013	S12	W07	.152	14143	30.9	27	-F						
ZURI	31	0946	1002	1018	S12	W07	.152	14143	30.9	32	-F		C	1002	183	1.9	
CATA	31	0950	1005	1005D	S12	W07	.152	14143	30.9	15D	-F	1		1005	112	1.2	
MONT	31	1001	1002	1007	S11	W08	.157	14143	30.8	6	-F		C	1002	40		
GRP63340	31	1053+0	1053+1	1059	S10	W03	.079	14143	31.2	6	-F				20	.2	D
ATHN	31	1053	1054	1057	S10	W03	.079	14143	31.2	4	-F			1054	20		
MONT	31	1053	1053	1101	S10	W03	.079	14143	31.2	8	-F		C	1053	20		D
GRP63341	31	1138+8	1200+0 1225>9	1350	S07	W09	.155	14143	30.8	132	1N						AFLU
ZURI	31	1138	1142	1148	S07	W09	.155	14143	30.8	10	1F		C	1142	326	3.4	
CATA	31	1140	1200	1400D	S08	W10	.174	14143	30.7	140D	1N	2		1200	224	2.4	
ATHN	31	1144	1200	1347	S07	W12	.207	14143	30.6	123	-N	3	C		95		F
MONT	31	1146	1210	1210D	S07	W10	.173	14143	30.7	24D	1N		C	1210	300		
ZURI	31	1150	1235	1320	S07	W10	.173	14143	30.7	90	2B		C	1235	611	6.4	
MEUD	31	1154	1225	1310	S05	W08	.141	14143	30.9	76	1N		C	1225	350	3.5	BA
RAMY	31	1202E	1202U	1440D	S06	W09	.156	14143	30.8	158D	1N	4	C		256		U F
RAMY	31	1202E	1202U	1212D	S06	W09	.156	14143	30.8	10D	-N	4	V		192		U
TEHR	31	1234E		1245D	S06	W09	.156	14143	30.8	41D	-N	3	V		190		U
WEND	31	1218E		1545	S09	W09	.160	14143	30.8	207D	2N		P		700		LU
ZURI	31	1339	1340	1344	S12	W07	.152	14143	31.0	5	-F		C	1340	82	.8	
GRP63342	31	1356	1357	1407	S08	W09	.157	14143	30.9	11	-F						
ZURI	31	1356	1357	1404	S12	W07	.152	14143	31.1	8	-F		C	1357	51	.5	
UPIC	31	1400E		1409	S05	W11	.192	14143	30.8	9D	-N		P	1400	122		

Hα SOLAR FLARES

MARCH 1976

OBSERVATORY	OBSERVED UT				LOCATION					DURATION	IMPORTANCE	OBS.		MEASUREMENTS			REMARKS
	DATE MAR	START	MAX. PHASE	END	APPROX. LAT.	APPROX. MER. DIST.	CENTRAL DISTANCE	McMATH PLAGE REGION	CMP. DAY	MIN.		COND.	TYPE	TIME UT	MEAS. AREA Mill. of Disk	CORR AREA Sq. Deg.	
GRPE3343	31	1437+0	1438+0	1442	S10	W05	.104	14143	31.2	5	-N						
ZURI	31	1437	1439	1442	S10	W05	.104	14143	31.2	5	-N		C	1438	122	1.3	
BOUL	31	1437	1438	1445	S10	W04	.091	14143	31.3	8	-F	1	C	1438	21	.2	
UPIC	31	1438E		1442	S10	W05	.104	14143	31.2	4D	1N		P	1438	204		
GRPE3344	31	1445+0	1449+0	1508	S11	W08	.157	14143	31.0	23	-F						
BOUL	31	1445	1449	1508	S11	W08	.157	14143	31.0	23	-F	1	C	1445	64	.6	
ZURI	31	1445	1449	1508	S12	W09	.180	14143	30.9	23	-N		C	1449	143	1.5	
GRPE3345	31	1830	1835	1905	S10	W12	.214	14143	30.9	35	-N				45	.5	
BOUL	31	1830	1835	1905	S11	W12	.219	14143	30.9	35	-N	2	C	1835	64	.7	
RAMY	31	1840E	1840U	1845D	S10	W13	.230	14143	30.8	5D	-F	3	V		30		
GRPE3346	31	2127	2134+1 2141	2146	S06	W08	.139	14143	31.3	19	-F				35	.4	
BOUL	31	2127	2135	2148	S09	W08	.144	14143	31.3	21	-F	*	C	2135	53	.5	
CULG	31	2134E	2134	2145	S01	W08	.169	14143	31.3	11D	-F	*	P	2134	20	.2	
RAMY	31	2140E	2141U	2146D	S07	W07	.121	14143	31.4	6D	-F	*	V		27		DE

"Remarks":

A = Eruptive prominence whose base is less than 90° from central meridian.
B = Probably the end of a more important flare.
C = Invisible 10 minutes before.
D = Brilliant point.
E = Two or more brilliant points.
F = Several eruptive centers.
G = No visible spots in the neighborhood.
H = Flare accompanied by a high speed dark filament.
I = Active region very extended.
J = Distinct variations of plage intensity before or after the flare.
K = Several intensity maxima.
L = Existing filaments show signs of sudden activity.
M = White-light flare.
N = Continuous spectrum shows effects of polarization.
O = Observations have been made in the calcium II lines H and K.
P = Flare shows helium D_3 in emission.
Q = Flare shows the Balmer continuum in emission.
R = Marked asymmetry in Hα line suggests ejection of high velocity material.
S = Brightness follows disappearance of filament (same position).
T = Region active all day.
U = Two bright branches, parallel (||) or converging (Y).
V = Occurrence of an explosive phase: important and abrupt expansion in about a minute with or without important intensity increase.
W = Great increase in area after time of maximum intensity.
X = Unusually wide Hα line.
Y = System of loop-type prominences.
Z = Major sunspot umbra covered by flare.

DAILY FLARE INDICES
Includes all Flares

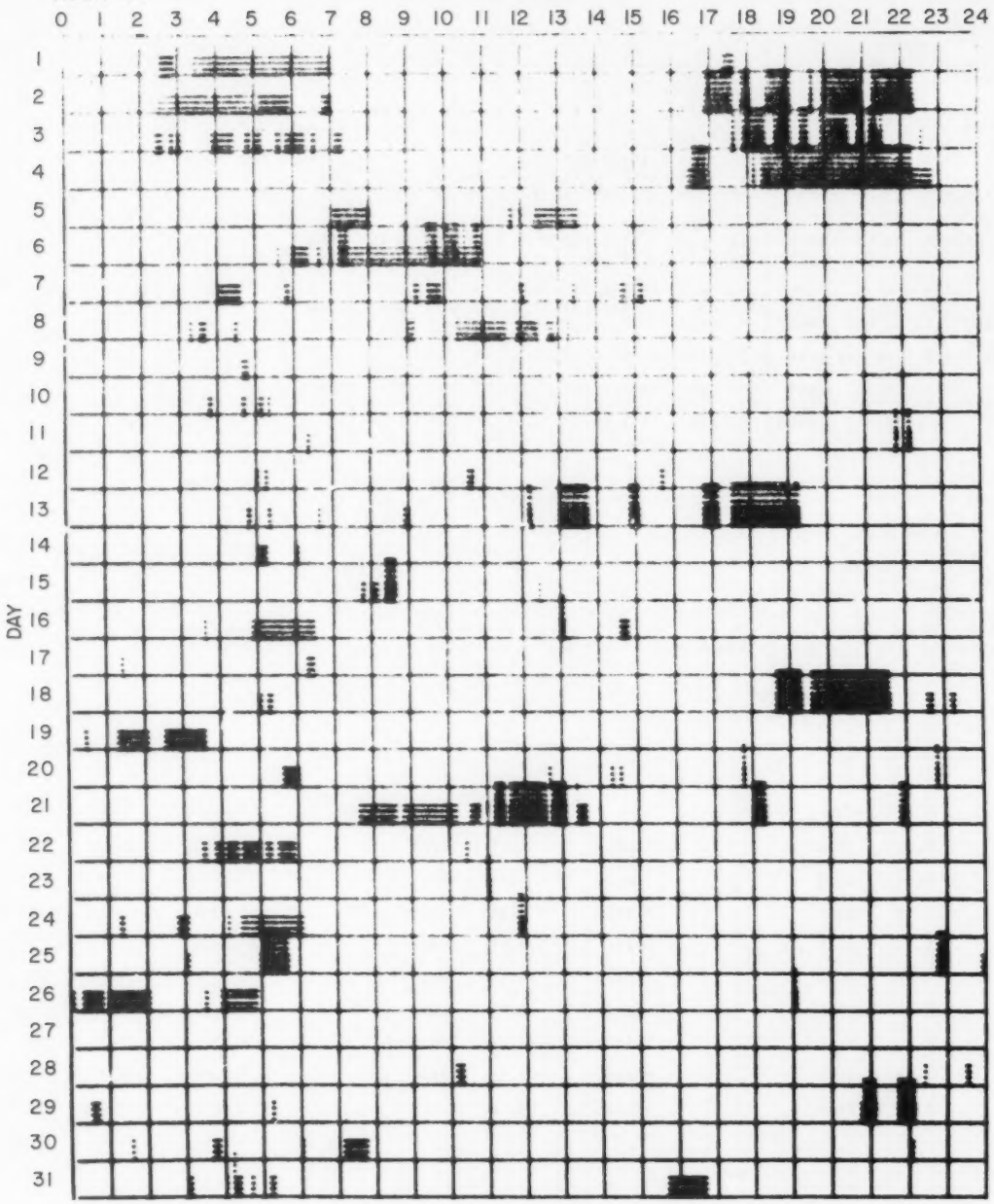
Date	Flare Index	HR. OBS.	Date	Flare Index	HR. OBS.	Date	Flare Index	HR. OBS.
760302	0.00	19.9	760313	3.79	20.5	760322	18.26	24.0
760303	0.00	21.2	760314	.84	24.0	760323	8.50	23.9
760304	0.00	19.5	760315	0.00	23.6	760324	14.46	23.8
760306	0.00	22.5	760316	5.72	23.8	760325	17.96	23.0
760307	6.39	24.0	760317	25.54	24.0	760326	20.06	23.8
760308	2.74	24.0	760318	36.79	21.2	760327	40.27	24.0
760309	2.74	24.0	760319	26.39	24.0	760328	71.10	24.0
760311	3.38	23.8	760320	46.92	23.8	760329	34.52	23.2
760312	0.00	24.0	760321	89.71	21.6	760330	28.35	24.0
						760331	73.07	23.9

When no Flare Index is given, it is 0 for that day.

INTERVALS OF NO FLARE PATROL OBSERVATION

FOR PRECEDING SOLAR FLARE TABLE

MARCH 1976



Observatories included in total patrol:

Abastumani	Catania	Hurbanovo	Manila	Palehua	Upice
Arcetri	Culgoora	Kharkov	McMath-Hulbert	Ramey	Voroshilov
Athenes	Haute Provence	Kodaikanal	Meudon	Tachkent	Wendelstein
Boulder	Herstmonceux	Locarno	Mitaka	Tehran	Zürich
Bucharest	Huancayo	Lvov	Monte Mario		

Times of no flare patrol are shown by the shaded area for each day divided into times of no cinematographic patrol (bottom half of day) and times of neither visual nor cinematographic patrol (top half of day).

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

MARCH 1976

MAR 1976	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
1	9500	POTS	4	0907	0907.5	3	61	13		
	1470	POTS	45	1410	1410.6	1	5.4	1.7		
3	9240	ARCE	2	1543	1543.6	1.4				
5	9240	ARCE	1	0802.3	0803	1.4				
	9240	ARCE	4	0842.4	0842.8	1				
	9240	ARCE	1	1327.3	1327.6	1				
	9240	ARCE	1	1337.6	1337.8	0.6				
	9240	ARCE	21	1411.6	1445.4	75				
	9240	ARCE	4	1423.7	1424	0.8				
	1420	BOUL	8 S	2327.5	2328	1.5	6	2		
	2695	BOUL	8 S	2329	2329.5	1.5	7	2		
7	18	MCMA	6 S	1648	1649	1			1	
	18	MCMA	42 SER	1710	1717	20			1	
	18	MCMA	41 F	1757	1759	11			1	
	18	MCMA	41 F	2030	2031	5			1	
	18	MCMA	41 F	2046	2047	4			1	
	18	MCMA	41 F	2107	2111	14			1	
	18	MCMA	41 F	2138	2143	39			1	
9	9240	ARCE	1	1340.9	1341	0.6				
10	9240	ARCE	1	1047.8	1048	0.6				
	9240	ARCE	1	1059.9	1100.1	0.5				
	9500	POTS	1	1246.9	1246.9	1.3	9.1			
11	930	BORD	8 S	1112.1	1112.1	0.1	11	1		
	18	MCMA	41 F	2121	2130	15			1	
12	18	MCMA	6 S	1343	1344	1			1	
	18	MCMA	41 F	2121	2132	11			1	
	18	MCMA	42 SER	2144	2150	54			1	
	2695	BOUL	1 S	2216.5	2217.5	1.5	2	1		
	18	MCMA	42 SER	2307	2330	25			1	
13	9240	ARCE	20	0854.7	0933.4	260				
	18	MCMA	6 S	1334	1335	2			1	
	930	BORD	8 S	1418.3	1418.3	0.1	70	1		
	18	MCMA	42 SER	2229	2259	34			1	
14	9500	POTS	4	0748	0748.6	4	40	11		
	930	BORD	8 S	1151.2	1151.2	0.2	17	2		
	1420	BOUL	3 S	1836.5	1837.5	2	2	1		
	410	SGMR	6 S	1837.2	1837.7	1.3	16.7	3.3		
	2695	SGMR	1 S	1837.2	1837.7	1.6	3.8	1.1		
	2800	OTTA	2 S/F	1837.3	1838	2	2.8	1.6		
	245	SGMR	6 S	1837.4	1837.6	.7	29.3	5.9		
	2695	BOUL	3 S	1837.5	1838.5	2	3	1		
	18	MCMA	41 F	2157	2210	15			1	
	18	MCMA	42 SER	2239	2335	74			1	
15	18	MCMA	6 S	2058	2059	2			1	
16	240	KIEL	44 NS	0700 E	1247	580	70	10		
	100	GORK	2 SF	1216.2	1216.4	0.7	80			
	2800	OTTA	240 R	1440	1610	90	1	0.5		
	2800	OTTA	24P R	1610		530 D	1			
	18	MCMA	6 S	2007	2009	2			1	
	200	HIRA	44 NS	2050 E	0518	715 D	13	4		SR
	18	MCMA	41 F	2150	2155	7			1	
	18	MCMA	41 F	2213	2223	12			1	
17	200	GORK	44 NS	0500 E		480 D		10		
	240	KIEL	44 NS	0700 E	1226	580	35	10		
	260	ONOR	44 NS	0730 E		458 D	12			
	9240	ARCE	1	1227.8	1228	0.6				
	2800	OTTA	22 GRF	1515	1645	185	1.6	0.9		
	2800	OTTA	240 R	1830	1930	60	1.8	0.9		
	2800	OTTA	24PFR	1930		145	1.8			
	200	HIRA	44 NS	2050 E	0328	715 D	15	5		SR
	2800	OTTA	240 R	2155	2210	15	1.8	0.9		
	2695	PENT	24P R	2210		170 D	1.8			
18	200	GORK	44 NS	0500 E		480 D		15		
	100	GORK	43 NS	0600		420		5		
	240	KIEL	44 NS	0700 E	1303	583	90	20		
	260	ONDR	44 NS	0715 E		474 D	18			
	127	TORN	44 NS	0730 E	1130 U	440 D				
	245	SGMR	44 NS	1054 E	2016.5	714 D	74.9			
	950	GORK	1 S	0943.8	0944.4	2.2	1.6			
	2800	OTTA	1 S	1411.5	1413	3	1.2	0.6		
	2695	SGMR	1 S	1412	1412.9	1.1	2.3	.7		

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MAR 1976	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
	2800	OTTA	20 GRF	1520	1535	55	0.8	0.6		
	2800	OTTA	27A RF	1710		96	1.2	1.1		
	2800	OTTA	24 R	1710	1720	10	1.2	0.6		
	18	MCMA	42 SER	1711	1721	12			1	
	2300	OTTA	24P R	1720		80	1.2			
	2800	OTTA	21 GRF	1740	1750	20	0.6	0.3		
	2800	OTTA	1 S	1749	1750	1.5	0.8	0.4		
	2800	OTTA	26 FAL	1840	1846	E	-1.2	-0.6		
	2800	OTTA	240 R	1915	1955	40	1.8	0.9		
	2800	OTTA	24P R	1945		300 D	1.8			
	200	HIRA	44 NS	2050 E	0241	715 D	35	20		ML
19	200	GORK	44 NS	0512 E		470 D		70		
	127	TORN	44 NS	0630 E		500 D				
	100	HIRA	27 RF	0643	0712	97 D	20	5		MR
	240	KIEL	44 NS	0700 E	1138	590	400	40		
	260	ONDR	44 NS	0730 E		460 D	44			
	100	GORK	43 NS	0809		291		5		
	1470	POTS	1	1015.5	1016	1	4.6	1.4		
	408	TRST	45	1016.1	1016.1	0.3	34	8		
	245	SGMR	44 NS	1052 E	1138	293 D	152.5			
	2800	OTTA	20 GRF	1555	1623	105	2.4	1.2		
	18	MCMA	6 S	2025	2027	2			1	
	200	HIRA	44 NS	2050 E	2321	715 D	75	45		SL
	100	HIRA	27 RF	2050 E	2107	50 D	20	5		O
	100	HIRA	45 C	2104	2104.6	1	250	100		O
	100	HIRA	45 C	2105.5	2105.7	1	150	70		O
	100	HIRA	45 C	2106.5	2108.2	2	120	30		O
	100	HIRA	45 C	2110	2110.7	1	170	60		O
	18	MCMA	41 F	2148	2205	43			2	
20	100	HIRA	45 C	0203.3		8.5		30		
	100	HIRA		0203.3	0206.5		180			WL
	100	HIRA		0203.3	0204.5		60			WL
	100	HIRA		0203.3	0209.6		210			WL
	500	HIRA	45 C	0203.5	0204	1	30	8		
	2000	TYKW	41 F	0203.8	0204.1	4	3.3	0.5		2OR
	3750	TYKW	45 C	0203.8	0204	1	17	3		OR,295021F
	1000	TYKW	41 F	0204	0204.1	3.5	5	0.4		3OL
	9400	TYKW	5 S	0337	0340	45	4	2		OR
	3750	TYKW	5 S	0337	0340	50	3	1		OR,295021F
	2000	TYKW	5 S	0337	0339.8	4	2.2	1		OL
	2000	TYKW	29 PBI	0341		60	1.3	0.6		
	2695	MANI	1 S	0338.4	0339.4	4.6	4.6	1.1		
	1415	MANI	1 S	0339	0340	3.8	2.1	.5		
	4995	MANI	1 S	0339	0340	3.5	4.4	1.2		
	606	MANI	1 S	0339.2	0339.8	1.8	2.7	1.4		
	1000	TYKW	45 C	0339.5	0339.9	1.5	2.6	1		3OL
	500	HIRA	45 C	0356.3	0356.7	1	47	12		
	100	GORK	44 NS	0509 E		381 D		10		
	500	HIRA	45 C	0516	0516.5	2	36	8		
	100	HIRA	43 NS	0545	0721	180 D	25	15		OSR
	500	HIRA	24 R	0557	0720	168 D	8	4		
	127	TORN	44 NS	0630 E		500 D				
	240	KIEL	44 NS	0700 U	1555	600	240	50		
	260	ONDR	44 NS	0734 E		412 D	27			
	245	SGMR	44 NS	1050 E	2153.5	722 D	138.2			
	500	HIRA	24 R	2041 E	2356	380 D	45	9		
	100	HIRA	44 NS	2050 E	0238	715 D	120	33		WR
	200	HIRA	44 NS	2050 E	0238	715 D	190	75		SL
	536	ONDR	45 C	0748.2	0750.5	5.5	58	3		
	500	HIRA	45 C	0748.4	0750.2	2	62	12		
	1000	TYKW	45 C	0748.5	0750.3	6.5	19	1.5		1OL
	2000	TYKW	45 C	0748.5	0750.3	6.5	10	2		08L
	510	POTS	40	0748.6	0750.2	2.4	160	15		
	606	MANI	40 F	0748.9	0750.3	5.4	93	5.4		
	650	GORK	41 F	0749	0750.5	2.7	118			
	650	GORK		0749	0753.5		24			
	950	GORK	4 S/F	0749	0750.5	6.7	19.6			
	9100	GORK	21 GRF	0749.5	0753	13	4.9	2		
	1470	POTS	4	0749.5	0750	2	11	4.7		
	9500	POTS	4	0749.5	0750	7.5	13	2.5		
	2695	MANI	1 S	0749.5	0750.4	2	9.7	3.4		
	3000	POTS	4	0749.8	0750.2	0.9	10	3.4		
	930	BORD	41 F	0749	0750.2	5.3	27	3		
	9100	GORK	1 S	0750	0750.5	1.5	13	6.5		
	3750	TYKW	5 S	0750	0750.2	1	13	3		OR
	9400	TYKW	5 S	0750	0750.3	1	12	3		OR
	1415	MANI	4 S/F	0750.2	0750.3	1.4	10.6	2.1		
	8800	MANI	2 S/F	0750.3	0750.5	1.2	13.5	5.1		
	4995	MANI	1 S	0750.3	0750.6	1.2	9.8	3.3		
	2950	GORK	3 S	0750.3	0750.6	0.9	12.9	6.4		
	808	ONDR	45 C	0750	0753.2	3.5	26	1.5		
	408	TRST	42	1000.4	1003.9	4	220			
	510	POTS	40	1002.7	1003.8	2.4	105	15		

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20	1470	PQTS	3		1003.6	1004	0.9	37	17		
	808	ONDR	3	S	1003.7	1003.7	0.4	15			
	536	ONDR	3	S	1004	1004	2	27 U	7		
	930	BORD	46	C	1004	1004	0.4	24	3		
	536	ONDR	3	S	1014.5	1015	2.5	9 U	6		
	650	GORK	1	S	1015	1015.5	1.2	21	10		
	950	GORK	1	S	1015	1015.3	0.9	3.2	1.5		
	3000	PQTS	4		1222.5	1223.5	2	13	3.1		
	7000	SAOP	21		1432.2	1433.8	17.6	5.5			OLOF
	4995	BOUL	3	S	1433.5	1434.5	2	6	2		
	7000	SAOP	1		1433.6	1433.8	1.2	4.6	2.2		OLOF
	2800	OTTA	1	S	1433	1434.4	2	5	2.5		
	2800	OTTA	30	PBI	1435	1435	8.5	1.4	0.7		
	2695	BOUL	2	SF	1434.5	1435.5	1.5	2	1		
	2800	OTTA	1	S	1439.5	1440	4	0.8	0.6		
	7000	SAOP	1		1445.2	1445.6	1.7	1.8	0.9		OLOF
	930	BORD	46	C	1445.8	1445.9	0.9	16	3		
	2800	OTTA	1	S	1445.9	1445.9	1.5	1.2	0.6		
	18	MCMA	6	S	1709	1711	3			N	
	2800	OTTA	21	GRF	1722		130	1.6	0.8		
	2695	SGMR	22	GRF	1753.6	1758.6	19.8	4.8	2.9		
	410	SGMR	6	S	1753.7	1758.5	21.3	60.6	12.1		
	4995	SGMR	22	GRF	1753.7	1811	22	10.7	6.4		
	2800	OTTA	40	F	1753	1758.5	19	2.4			
	1420	BOUL	45	C	1753	1758.5	9.5	10	3		
	2695	BOUL	45	C	1754	1759.5	10	3	1		
	7000	SAOP	21		1756.8	1811.1	15.4	3.5			OLOF
	7000	SAOP	1		1758.3	1758.7	0.9	1.7	0.8		OLOF
	1420	BOUL	1	S	1805	1805.5	2.5	2	1		
	7000	SAOP	1		1810.8	1811.1	0.7	2.6	1.4		OLOF
	1420	BOUL	1	S	1810	1811	3	2	1		
	2695	PENT	21	GRF	2004	2015	25	1.2	0.6		
	2695	PENT	1	S	2013.9	2014.1	1	1.6	0.8		
	1420	BOUL	8	S	2013	2013.5	1	6	2		
	100	HIRA	45	C	2110.7	2110.8	1	440	160		WR
	1420	BOUL	45	C	2148.5	2153.5	8	23	8		
	4995	BOUL	45	C	2150.5	2152.5	6	17	6		
	2800	OTTA	4	S/F	2150	2158	8	15	4.8		
	2800	OTTA	30	PBI	2158	2158	20	1.6	0.8		
	2695	BOUL	40	F	2150	2154	23	13	3		
	1000	TYKW	5	S	2150	2150.5	1.3	6	2		08L
	2000	TYKW	45	C	2150	2153.7	18	16	3		0L
	500	HIRA	45	C	2151.2	2153.3	3	40	12		
	1000	TYKW	45	C	2151.3	2153.7	4.7	53	10		12L/12R
	410	SGMR	6	S	2151.6	2152.6	19.3	87.4	26.2		
	3750	TYKW	45	C	2151	2153	8	20	5		17L
	2695	SGMR	1	S	2152.1	2153.7	4.7	5.8	1.7		
	9400	TYKW	5	S	2153	2153.4	1.5	5	2		0R
	1000	TYKW	5	S	2156	2156.2	1	14	2		20L
	1000	TYKW	45	C	2157	2205.4	10	11	3		22R
	1420	BOUL	45	C	2159.5	2202	6.5	4	1		
	4995	BOUL	45	C	2159	2200.5	8.5	8	3		
	2800	OTTA	2	S/F	2159	2202.5	8	3.2	1.6		
	18	MCMA	42	SER	2201	2210	9				
	18	MCMA	6	S	2237	2239	2			M	
	500	HIRA	45	C	2238.7	2241.7	4.3	55	12		
	2695	PENT	240	AR	2238.8	2304.8	16	1.6	0.8		
	2695	PENT	2	S/F	2238.8	2239.5	4	2.2	1.2		
	2695	PENT	24	P R	2239.5		120 D	1.6			
	2695	BOUL	45	C	2239.5	2240.5	4.5	2	1		
	2000	TYKW	5	S	2239	2241.5	4	2.4	0.5		0R
	1000	TYKW	45	C	2240.3	2241.6	2	4	1		35R
	1420	BOUL	1	S	2240.5	2241.5	1.5	4	1		
	100	HIRA	45	C	2256.5	2256.8	1.7	150	60		WL
	1000	TYKW	5	S	2356	2356.4	1	1.6	0.4		0R
21	2000	TYKW	5	S	0005	0005.4	1	2.4	0.5		0R
	9400	TYKW	20	GRF	0012	0045	70	11	7		0L
	3750	TYKW	20	GRF	0020	0055	60	3	1		0L
	3750	TYKW	21	GRF	0125	0150	65	5	2		0L,295043F
	2000	TYKW	21	GRF	0125	0149	65	3	1		0R
	2000	TYKW	45	C	0136.5	0142.1	10	25	4		28R
	1000	TYKW	45	C	0137.5	0138.1	2.5	3.8	0.8		40R
	606	MANI	4	S/F	0137.9	0140.4	5.9	56	21.3		
	4995	MANI	3	S	0138.8E	0141.3U	5.2D	17.9U	10.2D		
	1415	MANI	4	S/F	0138.8E	0140.8U	5.2D	51.9D	17.5D		
	2695	MANI	4	S/F	0138.8E	0140.8U	5.2D	15.4U	6.8D		
	500	HIRA	45	C	0139.5	0140.3	3.5	39	16		
	9400	TYKW	5	S	0140	0142	5	4	2		0L
	3750	TYKW	45	C	0140	0140.8	6	14	5		0L
	1000	TYKW	45	C	0140	0142.3	3	71	28		SR
	1000	TYKW	30	PBI	0143		7	1.4	0.7		
	4995	MANI	3	S	0147.6	0151.7	6.9	17.9	5.1		
	1000	TYKW	45	C	0148.3	0148.5	0.8	8	2.5		05R
	2695	MANI	4	S/F	0148.4	0151.7	7.8	20.5	6.8		

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21	2000	TYKW	5 S	0149.5	0151.7	8	18	3		OR
	606	MANI	4 S/F	0149.6	0151.5	3.2	17.9	6.7		
	9400	TYKW	5 S	0149	0151.5	5	14	4		OL
	9400	TYKW	29 PBI	0154		45	6	3		
	1415	MANI	4 S/F	0150.4	0151.5	3.1	15.4	4.8		
	3750	TYKW	5 S	0150.5	0151.6	5.5	19	6		15L,295043F
	1000	TYKW	5 S	0150	0151.8	4	41	10		SR
	500	HIRA	45 C	0151	0151.7	1.3	12	5		
	1000	TYKW	45 C	0200	0204.8	10	8	1.5		37R
	2000	TYKW	45 C	0200	0204.7	10	7	1.5		06R
	606	MANI	4 S/F	0201.5	0204.1	3.9	13.4	5		
	4995	MANI	1 S	0201.9	0204.7	5.1	5.1	1.3		
	2695	MANI	2 S/F	0201.9	0204.7	5.1	5.7	2.3		
	1415	MANI	2 S/F	0201.9	0204.7	4.1	6.4	2.7		
	3750	TYKW	5 S	0202	0204.6	7	3	1		OL,295043F
	1000	TYKW	45 C	0244	0244.2	1	52	10		05R
	1000	TYKW	45 C	0245.8	0246	0.8	13	3		05R
	500	HIRA	26 FAL	0300	0313.8	300	9	4		
	3750	TYKW	20 GRF	0325	0353	70	3	1		OL,295043F
	2000	TYKW	20 GRF	0345	0352	50	1.4	0.5		OL
	100	GORK	44 NS	0453		389 D		35		
	127	TORN	44 NS	0630 E		500 D				
	240	KIEL	44 NS	0700 E	0951	592	450	100		
	260	ONDR	44 NS	0730 E		467 D	135			
	405	KIEL	44 NS	0835	0916.5	173	115	55		
	245	SGMR	44 NS	1048 E	1226.7	686 D	120.5			3.5,SWF
	200	HIRA	44 NS	2050 E	2317	715 D	30	10		MR
	100	HIRA	44 NS	2050 E	2211	225 D	70	30		MR
	9400	TYKW	20 GRF	0500	0517	60	6	3		OL
	2000	TYKW	21 GRF	0500	0510	45	2	1		OL
	3750	TYKW	20 GRF	0500	0510	40	2	1		OL
	2000	TYKW	5 S	0502	0502.5	1	0.6	0.2		MR
	2000	TYKW	5 S	0507.5	0507.7	0.6	1.4	0.5		OR
	9100	GORK	1 S	0636	0637.5	3	7	3.5		
	1415	MANI	2 S/F	0636.4	0637.2	1.7	9.7	2.7		
	2695	MANI	1 S	0636.5	0637.1	2	4.2	1.2		
	4995	MANI	1 S	0636.7	0637	1.5	3.8	1.3		
	8800	MANI	1 S	0636.7	0637	2.5	6.5	1.6		
	9400	TYKW	5 S	0636	0636.7	2	7	3		OL
	1000	TYKW	5 S	0636	0636.7	2	5.8	1.5		OR
	2000	TYKW	5 S	0636	0636.8	2	4	1		OR
	3750	TYKW	5 S	0636	0636.8	2	3	1		OL
	2950	GORK	1 S	0637	0637.4	0.9	4.3	2		
	100	HIRA	45 C	0738.7	0738.8	1	600	200		ML
	808	ONDR	45 C	0751.4	0810.8	17	115	19		
	808	ONDR		0751.4	0808.6		83			
	9100	GORK	21 GRF	0754	0813.5	60	18	7		
	4995	MANI	41 F	0754.2	0811.2	19.3	28.8	10		3 SWF
	8800	MANI	4 S/F	0754.2	0757.3	14.8	37.5	16.3		3 SPA
	510	POTS	40	0755.6	0756.9	3.8	28	3		
	9500	POTS	3	0756	0757	5	25			
	9500	POTS	21	0756	0805	59	11			
	1470	POTS	21	0756	0817.8	50	3.4			
	3000	POTS	21	0756	0805	59	4.5			
	536	ONDR		0756.4	0759.2		37			
	606	MANI	41 F	0756.4	0808.6	21.4	54.9	16.1		IIIG
	536	ONDR		0756.4	0757		35			
	536	ONDR	45 C	0756.4	0808.2	21.5	48	10		
	536	ONDR		0756.4	0810.8		37			
	1415	MANI	41 F	0756.5	0811.1	33.5	43.2	10.8		
	2695	MANI	41 F	0756.5	0811.2	33.5	36	10.8		
	3000	POTS	45	0756.5	0757.2	4.5	11			
	1470	POTS	46	0756.5	0759.7	4.5	26			
	500	HIRA	45 EC	0756.5	0756.5	1.5	40	20		
	1420	KIEL	45 C	0756.5	0759.5	4	60	40		SR
	1030	KIEL	45 C	0756.5	0759.5	4	80	50		SR
	1000	TYKW	45 C	0756.5	0759.5	4.5	41	10		SR
	1000	TYKW			0757.7		39			
	2000	TYKW	45 C	0756.5	0757.4	5	61	13		MR
	2000	TYKW			0759.6		51			
	113	POTS	41	0756.6	0759.4	5.5	500	25		
	405	KIEL	45 C	0756	0759	5	90	30		SR
	800	KIEL	45 C	0756	0759	5	20	15		SR
	602	KIEL	45 C	0756	0757	4	35	20		SR
	3750	TYKW	45 C	0756	0757.2	6	11	3		20R
	3750	TYKW			0759.4		8			
	9400	TYKW	45 C	0756	0757.1	5	26	9		13L
	9400	TYKW			0759.3		6			
	9100	GORK	3 S	0757	0757.5	4.5	29	15		
	2950	GORK	45 C	0757	0757.6	6.5	15			
	2950	GORK		0757	0800		10.6			
	650	GORK	41 F	0757.2	0758	3.7	29			
	650	GORK		0757.2	0800		22			
	100	GORK	41 F	0757.5	0757.8	2.9	560 D			
	500	HIRA	45 C	0759.6	0759.8	0.5	40	23		

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21	1030	KIEL	45 C	0801	0810.5	15	90	50		
	800	KIEL	45 C	0801	0811.5	14	70	40		
	1000	TYKW	42 SER	0801	0804.2	6.5	3.7	0.5		5OR
	1420	KIEL	45 C	0803	0811	16	70	40		
	3000	POTS	46	0805	0811	9	43			
	602	KIEL	45 C	0805	0808.5	10	60	30		
	405	KIEL	45 C	0805	0811	11	140	60		
	1470	POTS	46	0806	0811	7.5	39			
	650	GORK	46 C	0806	0808.4	7.4	65			
	650	GORK		0806	0811		40			
	2950	GORK	45 C	0806.5	0808.5	8.1	15			
	2950	GORK		0806.5	0810.3		46			
	2950	GORK		0806.5	0811.2		58			
	2000	TYKW	45 C	0806.5	0811	7	35	9		2OR
	3750	TYKW	45 C	0806.5	0811.1	7	28	4		05R
	1000	TYKW	45 C	0807.5	0811.2	6	48	13		SR
	510	POTS	40	0807.5	0808.6	5.5	56	7		
	500	HIRA	45 C	0807.5	0808.5	1.2	55	23		
	9500	POTS	3	0809.5	0811	4	22			
	9100	GORK	1 S	0809.5	0811	4.5	11	5		
	500	HIRA	45 C	0810.2	0811	1.5	25	15		
	650	GORK	1 S	0821.4	0822.5	3.3	4.6	2		
	3000	POTS	3	0821.5	0822.2	2	8.1			
	1470	POTS	4	0821.5	0822	2.5	10			
	1420	KIEL	45 C	0821	0822	3	50	30		
	950	GORK	1 S	0822	0822.6	2.7	5.2	2.6		
	930	BORO	45 C	0856.4	0911.1	17.6	76	10		
	234	POTS	40	0938.8	0939	0.3	350	7		
	9100	GORK	21 GRF	0940	0953.5	26.5	4	2		
	9500	POTS	1	0946.5	0947.2	2.5	6.5			
	2950	GORK	1 S	0946.9	0947.6	1.1	6.8			
	9100	GORK	1 S	0947	0947.5	1	6.9	3		
	3000	POTS	2	0947	0947.6	1	3.3			
	3000	POTS	22	1105 U	1109.6	15 U	4.2			
	9500	POTS	22	1105	1114.2	26	12			
	9100	GORK	2 SF	1113.5	1114.5	7.5	7.5	2		
	15400	SGMR	20 GRF	1241	1257.6	57.9	16.2	9.7		
	2695	SGMR	46 C	1241.6	1250.6	29.1	35.4	10.6		
	2695	SGMR	46 C		1259.5		25.8			
	2695	SGMR	29 PBI	1310.7	1310.7	14.8	4.6	1.8		
	8800	SGMR	22 GRF	1243.5	1259.3	55.5	20.7	12.4		
	9400	HUAN	20	1245.3		38.3		8.3		
	4995	SGMR	46 C	1247.3	1250.8	21.1	17.3	9.8		
	4995	SGMR	46 C		1259.4		32.6			
	4995	SGMR	29 PBI	1308.4	1308.4	14.6	12.2	4.9		
	2800	OTTA	46F C	1247	1250.2	14.5	24	9.8		
	2800	OTTA		1247	1250.2	8	24			
	2800	OTTA		1255	1259.5	6.5	18.6			
	2800	OTTA	30 PBI	1301.5	1301.5	44	4.8	2.4		
	1470	POTS	46	1248	1252.5	26	21	5.4		
	3000	POTS	46	1248	1250.5	46	26			
	9500	POTS	22	1248	1259.4	55	23			
	7000	SAOP	28	1255.2		1.6				
	7000	SAOP	46	1257	1259.6	4.2	24.6	13		BLOF
	7000	SAOP	30	1301		15.4				
	2800	OTTA	2 S/F	1303.5	1306.5	7	6.4	3.2		
	7000	SAOP	20	1303.6		9				
	930	BORO	40 F	1349	1349.8	24	12	2		
	2800	OTTA	23 GRF	1400	1422	180	4.6	2.6		
	18	MCMA	6 S	1555	1556	2				
	2800	OTTA	1 S	1600	1600.5	1	1.2	0.6		
	2800	OTTA	22 GRF	1702	1720	80	2	1.2		
	1420	BOUL	40 F	1759	1802	11.5	20	8		
	1420	BOUL	45 C	1812.5	1814	5.5	2	1		
	2800	OTTA	24 R	1825	1835	10	1.4	0.7		
	2800	OTTA	27AFRF	1825		70	1.4	1.1		
	2800	OTTA	24P R	1835		40	1.4			
	2695	SGMR	46 C	1826.2	1844	29.8	86.6	26		
	2695	SGMR	46 C		1848.6		20.3			
	2695	SGMR	29 PBI	1856	1856	15	3.5	1.4		
	4995	SGMR	46 C	1829.1	1843.9	22.1	160.6	32.2		
	4995	SGMR	46 C		1848.6		34.7			
	4995	SGMR	29 PBI	1851.2	1851.2	14.6	6.2	2.5		
	8800	SGMR	46 C	1829.2	1843.8	20.8	186.8	37.4		
	8800	SGMR	46 C		1848.4		42.8			
	8800	SGMR	29 PBI	1850	1850	21.4	22.5	9		
	7000	SAOP	28	1834.2		7				
	2695	BOUL	45 C	1835.5	1846	24	67	15		
	15400	SGMR	4 S/F	1837.4	1842	33.2	97.2	29.2		
	2800	OTTA	45 C	1838	1845	14	80	21.4		
	9400	HUAN	45	1839	1844	37.6	134.4	23.8		10L
	410	SGMR	6 S	1840.3	1843.5	9.7	112.8	33.9		
	4995	BOUL	45 C	1840	1844.5	10.5	155	53		
	245	SGMR	6 S	1841.2	1843.3	8.6	76.4	15.3		
	7000	SAOP	46	1841.2	1843.8	6.6	190.2	118.9		BLOF

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21	7000	SAOP	30	1847.8	1848.5	12.4	40.4	10.1		BLOF
	7000	SAOP	3	1847.8	1848.5	1.6	27.6	13.7		BLOF
	2800	OTTA	2 S/F	1853.5	1854.1	5	4.8	1.6		
	2800	OTTA	26 FAL	1915	1935	20	-1.4	-0.7		
	2800	OTTA	22 GRF	1940	2020	55	1.4	0.7		
	245	SGMR	6 S	2028.2	2040.7	83.8	82.3	16.5		
	410	SGMR	6 S	2040.9	2043.7	49.3	5.6	1.7		
	200	HIRA	45 C	2050 E	2147.5	70 D	150	45		ML
	2800	OTTA	1 S	2055	2058.2	9	1.2	0.5		
	2800	OTTA	32A ABS	2110	2225	155	-6.2	-3.1		
	2800	OTTA	46F C	2131.9	2233.7	4.5	94	24		
	2800	OTTA	29 PBI	2236.4	2236.4	40	3.4	1.7		
	4995	BOUL	23 GRF	2230.5	2233	22	24	6		
	1420	BOUL	4 SF	2231.5	2234	5	52	17		
	606	MANI	40 F	2231.5	2233.5	20.1	181	50		
	1000	TYKW	45 C	2231.5	2233.8	5	38	11		MR
	500	HIRA	45 C	2231.7	2233.3	4.5	200	30		
	4995	MANI	3 S	2231.8	2233.8	5.7	19.2	5.1		
	8800	MANI	3 S	2231.8	2233.8	5.7	28.6	13.4		
	2695	MANI	46 C	2231.8	2233.8	5.7	104	27.9		
	2695	MANI	46 C		2232.2		47.1			
	1415	MANI	46 C	2231.8	2234.2	5.7	44.7	19.1		
	1415	MANI	46 C		2233.2		22			
	9400	HUAN	20	2231.9	2233.6	3.3	22.2	7.6		31L
	9400	TYKW	5 S	2231	2233.7	7	26	7		14L
	3750	TYKW	45 C	2231	2233.7	7	40	10		09R/25L
	3750	TYKW	29 PBI	2238		40	2	1		
	2695	BOUL	45 C	2232.5	2235	5	117	35		
	2000	TYKW	45 C	2232	2233.8	4	130	30		MR
	200	HIRA	45 C	2233.3	2233.5	1.5	480	100		MR
	18	MCMA	6 S	2237	2239	3			2	
	720	SYDN	45 C	2241	2246.5	12				
	1000	TYKW	45 C	2243	2248.6	17	19	2		25L
	1400	SYDN	45 C	2246	2248.5	6.6				
	1420	BOUL	45 C	2247.5	2248.5	2.5	3	1		
	9400	TYKW	5 S	2328	2335	21	7	3		OL
	1400	SYDN	4 S/F	2333	2334.2	2.2				
	1000	TYKW	45 C	2333.5	2334.5	4	3	1		50R
	2800	OTTA	2 S/F	2333.5	2334.3	3	9.4	2.4		
	3750	TYKW	5 S	2333	2334.4	5	2	1		OL
	2000	TYKW	45 C	2334	2334.4	2	11	2		50R
	2695	BOUL	8 S	2334	2235	2.5	7	4		
22	720	SYDN	8 S	0049.7	0050.2	0.6				
	1415	MANI	2 S/F	0116.6	0118.4	3.2	4.6	1.2		
	2695	MANI	1 S	0116.6	0118.4	2.9	3.1	.6		
	4995	MANI	1 S	0116.8	0118.4	2.9	6.4	1.3		
	8800	MANI	1 S	0117.3	0118.4	2.5	6.7	1.7		
	720	SYDN	4 S/F	0117.5	0118.2	1.2				
	1400	SYDN	4 S/F	0117.5	0117.7	1.1				
	500	HIRA	45 C	0117.5	0117.8	1.5	10	8		
	100	HIRA	45 C	0117.5	0117.6	1	170	30		WRWL
	606	MANI	40 F	0117.6	0118.1	1	16.8	6		
	1000	TYKW	5 S	0117	0118.4	3	11	3.5		MR
	2000	TYKW	5 S	0117	0118.3	2	2.4	0.8		OR
	3750	TYKW	5 S	0117	0118.4	5	2	1		OL,296066F
	9400	TYKW	5 S	0117	0118.4	3	2	1		OL
	100	HIRA	45 C	0229	0229.7	1.5	790	300		WR
	720	SYDN	45 C	0313	0313.3	1				
	1000	TYKW	5 S	0313.2	0313.4	0.8	11	2		10R
	2000	TYKW	5 S	0313.2	0313.6	0.8	1.2	0.4		OR
	3750	TYKW	5 S	0313.3	0313.5	0.7	1	0.3U		OL
	3750	TYKW	5 S	0402	0403	4	2	1		OL,296066F
	720	SYDN	4 S/F	0403	0403.2	0.6				
	500	HIRA	5 ES	0417.5	0417.5	0.3	28	20		
	720	SYDN	45 C	0419.4	0421.5	2.7				
	1400	SYDN	4 S/F	0419.5	0421.1	2.5				
	2000	TYKW	45 C	0419.5	0421.2	4	29	6		22R
	3750	TYKW	5 S	0419.5	0421.2	4	30	7		11R,296066F
	500	HIRA	45 C	0419.5	0421.3	2.7	80	23		
	1000	TYKW	45 C	0419.5	0421.4	2.5	19	5		21R
	4995	MANI	4 S/F	0419.5	0421.4	3.3	48.1	15.6		
	606	MANI	40 F	0419.5	0421.3	3.3	179	49.4		
	1415	MANI	4 S/F	0419.5	0421.3	2.5	16.2	6.5		
	2695	MANI	4 S/F	0419.5	0421.3	3.4	29.1	13		
	8800	MANI	3 S	0419.8	0421.4	3	68	30.6		
	9400	TYKW	5 S	0419	0421.2	6	70	12		05L
	100	GORK	44 NS	0503 E		450 D		10		
	100	HIRA	43 NS	0548	0621	175 D	40	10		OMR
	100	HIRA	45 C	0552.5	0552.8	1	350	70		WR
	127	TORN	44 NS	0630 E	1150	500 D				
	240	KIEL	44 NS	0700 E	1238	600	90	70		
	260	ONDR	44 NS	0710 E		480 D	21			
	3000	POTS	4	0806	0808.5	7	28	10		
	1470	POTS	4	0806.5	0808.5	12	19	6		

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22	1415	MANI	4 S/F	0806.8	0808.9	7.2	16.2	6.5		
	606	MANI	4 S/F	0806.8	0807.7	7.2	67	8.4		
	950	GORK	4 S/F	0806.9	0808.2	3.4	14	7		
	9100	GORK	5 S	0807	0809	3.3	15.8	3		
	9100	GORK	29 PBI	0807	0810	22	5.8	2.9		
	4995	MANI	4 S/F	0807	0808.8	5.2	28.6	5.2		
	8800	MANI	4 S/F	0807	0808.2	7.3	17	3.4		
	2695	MANI	4 S/F	0807	0808.8	7.6	27.3	8.1		
	808	ONDR	4 S/F	0807.3	0808.2	2.5	32	9		
	930	BORD	46 C	0807.3	0808.2	3.4	15	6		
	650	GORK	4 S/F	0807.4	0808	1.5	49			
	536	ONDR	4 S/F	0807.4	0808	3.5	70	8		
	500	HIRA	45 C	0807.5	0807.7	2.3	120	15		
	2950	GORK	3 S	0808.5	0808.7	1.3	13	6.5		
	2800	OTTA	22 GRF	1210	1250	220	5	2.7		
	113	POTS	45	1416.2	1416.3	0.2	140	25		
	18	MCMA	6 S	1458	1501	3			1	
	2800	OTTA	27A RF	1705		275	2.6	2.2		
	2800	OTTA	24 R	1705	1740	35	2.6	1.3		
	2800	OTTA	24P R	1740		200	2.6			
	2800	OTTA	20 GRF	1810	1930	60	1.2	0.6		
	2800	OTTA	1 S	2057	2058	2	1	0.5		
	2800	OTTA	26 FAL	2100	2140	40	-2.2	-1.1		
	2800	OTTA	24OAR	2153	2208	15	3.2	1.6		
	1420	BOUL	40 F	2155.5	2159.5	14	11	3		
	2800	OTTA	22 GRF	2155	2159.5	13	6.6	2.6		
	2695	PENT	24P R	2208		150 D	3.2			
	500	HIRA	27 RF	2155	2220	60	5	2		
	1400	SYDN	45 C	2157.2	2159.6	7.4				
	2000	TYKW	45 C	2157	2202.4	7	11	2		65R
	410	SGMR	6 S	2159.2	2202.4	54.8D	33.4	10		
	2695	BOUL	45 C	2159.5	2200	7.5	4	1		
	1000	TYKW	45 C	2159.5	2202.4	4.5	5	0.7		30R
	245	SGMR	6 S	2201	2202.4	53 D	50.1	15		
	500	HIRA	45 C	2202.2	2202.3	5	60	15		
	1000	TYKW	45 C	2214	2216	4	4	0.8		06R
	1420	BOUL	1 S	2215.5	2216	1.5	1			
	2695	PENT	20 GRF	2236	2300	95	2.8	1.4		
23	720	SYDN	45 C	0037.9	0038.1	1.7				
	720	SYDN	45 C	0048.2	0051.5	4.3				
	606	MANI	4 S/F	0051.1	0051.6	4.3	32	6.2		
	3750	TYKW	5 S	0112	0116.4	8	2	1		OL,296080F
	1415	MANI	1 S	0113.5	0116.4	5.5	3.5	.6		
	606	MANI	40 F	0113.5	0116.4	4.5	339	27.8		
	2695	MANI	1 S	0114.3	0116.4	4.9	3.2	.6		
	720	SYDN	45 C	0114.3	0116	3.7				
	1400	SYDN	2 S/F	0115	0116.2	2.2				
	2000	TYKW	45 C	0115	0116.2	4	3	1		OR
	9400	TYKW	5 S	0115	0116	4	3	1		OL
	1000	TYKW	45 C	0115	0116.2	2	38	5		07R
	2000	TYKW	21 GRF	0243	0248.5	90	1.4	0.5		OR
	3750	TYKW	5 S	0245	0248	9	2	1		OL,296080F
	9400	TYKW	5 S	0245	0248	25	2	1		OL
	100	HIRA	43 NS	0300	0635	350 D	40	20		O
	200	GORK	44 NS	0454 E		486 D		5		
	100	GORK	44 NS	0500 E		480 D		30		
	127	TORN	44 NS	0630 E		500 D				
	240	KIEL	44 NS	0630 E	1224	630	500	100		
	260	ONDR	44 NS	0656 E		494 D	230 D	120		
	405	KIEL	44 NS	0800	1047	480	90	40		
	250	DWIN	44 NS	0900 E		210 D		4		
	169	DWIN	44 NS	0900 E		210 D		2		
	160	DWIN	44 NS	0900 E		210 D		2		
	245	SGMR	44 NS	1045 E	2229.5	730 D	65.9			
	410	SGMR	43 NS	1648.3	1829.4	366.7D	51.1			
	2000	TYKW	20 GRF	0310	0325	60	0.8	0.4		OR
	3750	TYKW	20 GRF	0310	0325	60	2	1		OL,296080F
	500	HIRA	27 RF	0420	0428	17	6	3		
	200	HIRA	27 RF	0421	0436	43	17	8		O
	2000	TYKW	20 GRF	0450	0520	70	2	1		OR
	3750	TYKW	20 GRF	0458	0520	60	4	2		OL
	9400	TYKW	5 S	0458	0505	30	4	2		OL
	650	GORK	41 S/F	0607.1	0609.1	10.9	10			
	650	GORK		0607.1	0613.3		11			
	950	GORK	41 F	0612.8	0613.3	4.6	1			
	950	GORK		0612.8	0617.2		1.8			
	950	GORK	40 F	0631.5	0637.8	8.2	2			
	1470	POTS	46	0838.5	0843.2	60	409	133		
	3000	POTS	46	0839	0842.6	61	325 U	114 U		
	500	HIRA	45 C	0839.3	0842	8 D	390	150 U		
	510	POTS	45	0839.4	0844.5	20	155	30		
	2950	GORK	48 C	0840.2	0842.8	9.4	653			
	2950	GORK	29 PBI	0840.2	0849.6	39.4	324	158		
	2695	MANI	47 GB	0840.3	0843	29.2	550	150		

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23	2695	MANI	47 GB		0844.9		350			
	2695	MANI	29 PBI	0909.5	0909.5		54			SUNSET
	4995	MANI	47 GB	0840.3	0845.6	29.2	760	300		
	4995	MANI	47 GB		0847.1		950			
	4995	MANI	29 PBI	0909.5	0909.5		72			SUNSET
	536	ONDR	49 GB	0840.4		23	130 D	78		
	9100	GORK	49 GB	0840.5	0847	14.5	921	218		
	9100	GORK	30 PBI	0840.5	0855	200 D	89	29		
	808	ONDR	49 GB	0840.6	0843.7	26	630 D	171		
	1415	MANI	46 C	0840.6	0842.9	28.9	370	86		
	1415	MANI	46 C		0845		293			
	1415	MANI	29 PBI	0909.5	0909.5		20.4			SUNSET
	234	POTS	45	0840.7	0842	35	16000	240		
	950	GORK	48 C	0840.7	0843.2	6.5	1560			
	950	GORK	29 PBI	0840.7	0847.2	42.1	170	26		
	650	GORK	47 GB	0840.7	0842.8	32	362			
	650	GORK		0840.7	0843.3		474			
	408	TRST	47	0840.9	0844.4	10.9				
	8800	MANI	47 GB	0840.8	0845.3	28.7	1350	520		
	8800	MANI	47 GB		0847.1		1400			
	8800	MANI	29 PBI	0909.5	0909.5		156			SUNSET
	606	MANI	47 GB	0840.8	0843.3	13.6	580	178		
	606	MANI	47 GB		0844.8		430			
	606	MANI	29 PBI	0854.4	0854.4		24.2			SUNSET
	800	KIEL	47 GB	0840	0843.5	40	1600	280		SR,MR
	602	KIEL	47 GB	0840	0843	37	460	160		SR,MR
	405	KIEL	47 GB	0840	0854.5	26	500	180		SR,MR
	240	KIEL	47 GB	0840	0842	36	16000	500		SR,MR
	1420	KIEL	47 GB	0840	0842.5	51	710	210		SR,MR
	1030	KIEL	47 GB	0840	0842.5	51	2380	500		SR,MR
	260	ONDR	49 GB	0841.2		28	230 D	110		
	200	GORK	48 C	0841.2	0842.8	12.5	20000			
	113	POTS	45	0841.3	0842.9	59	14000	900		
	228	MARS		0841.3	0847		630			
	228	MARS		0841.3	0844.1		495			
	228	MARS		0841.3	0843.7		780			
	228	MARS		0841.3	0843.5	0.2U	810			
	228	MARS		0841.3	0843	0.4U	570			
	228	MARS		0841.3	0842.5	0.4U	490			
	228	MARS	47 GB	0841.3	0842	8.7	1000	380		
	200	HIRA	45 C	0841.5	0844.7	9 D	1000 U	500 U		OWL
	100	GORK	48 C	0841.6	0842.7	14.7	160000			
	127	TORN		0841.9	0858	8	200			
	127	TORN		0841.9	0847.5	2 U	3500			
	127	TORN	49 GB	0841.9	0842.5	38	1700 D			
	100	HIRA	45 C	0843.6		10 D	1000 D	600 D		WL
	650	GORK		0848.8	0848.8	22.6	68			
	228	MARS	1 S	0853.8	0854	1 U	72	14		
	9100	GORK	3 S	0857.5	0913.5	7	99	52		
	536	ONDR	4 S/F	0951	0951.8	2	53	3.5		
	950	GORK	41 F	1022.8	1026.4	8.4U	16			
	950	GORK		1022.8	1030.2		19.4			
	9100	GORK	45 C	1023.5	1026	9.5	12	3.5		
	9100	GORK		1023.5	1030		9.3			
	650	GORK	41 F	1023.6	1023.8	10.2	28			
	650	GORK		1023.6	1025.9		27			
	650	GORK		1023.6	1026.5		37			
	536	ONDR	4 S/F	1023	1023.6	8.5	63	4.2		
	2950	GORK	21 GRF	1024.8	1027	19	6.7	2		
	2950	GORK	2 SF	1025.5	1026.6	1.6	4	3		
	808	ONDR	4 S/F	1025	1026.2	2	28	8.8		
	808	ONDR	4 S/F	1029.2	1030	1.5	28	5		
	3000	POTS	4	1029.5E	1030	2.5U	8.8	4		
	1470	POTS	4	1029.5E	1030	2.5U	16	7.6		
	2950	GORK	1 S	1029.7	1030.2	1	5.2	2.5		
	950	GORK	41 F	1158.1	1158.8	9.2	3.9			
	950	GORK		1158.1	1206		3.4			
	950	GORK	1 S	1218.1	1520.3	5.9	1.9	1		
	950	GORK	22 GRF	1239.8	1245.7	8.5	4			
	950	GORK	1 S	1252.1	1254.7	4.5	1.5	0.7		
	2800	OTTA	26 FAL	1335	1452	77	-4.6	-2.3		
	7000	SAOP	40	1354.9		0.7	3.3			ORDO
	18	MCMA	6 S	1356	1358	2			1	
	930	BORD	41 F	1535.2	1535.8	0.7	9	2		
	2800	OTTA	240 R	1620	1635	15	1.8	0.9		
	2800	OTTA	24P R	1635		460 D	1.8			
	18	MCMA	6 S	1713	1714	3			1	
	2800	OTTA	20 GRF	1805	1812	20	0.8	0.4		
	2800	OTTA	1 S	1938	1939	6	2	0.8		
	2800	OTTA	20 GRF	2014	2015	12	1	0.6		
	500	HIRA	45 C	2100.2	2100.3	0.5	780	150		
	18	MCMA	42 SER	2146	2149	98			2	
	2800	OTTA	1 S	2148	2148.5	2	2	1		
	2800	OTTA	32A ABS	2155	2225	50	-2	-1		
	4995	BOUL	1 S	2234.5	2236	3.5	6	2		

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MAR 1976	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	POLARIZATION OR REMARKS
	720	SYDN	45 C	2234.6	2236.7	4.9				
	1400	SYDN	45 C	2234.8	2237.4	3.4				
	1000	TYKW	45 C	2235.5	2237.5	3	24	6		MR
	2000	TYKW	45 C	2235.5	2237.4	3	20	7		35R
	3750	TYKW	45 C	2235.5	2236	3	7	3		27R
	2695	BOUL	45 C	2235.5	2238	3	19	7		
	1420	BOUL	45 C	2235	2237	4.5	7	3		
	2800	OTTA	4 S/F	2235	2237	3	14.8	7		
	1420	BOUL	3 S	2306	2306.5	2	1			
	1000	TYKW	5 S	2307	2307.4	1	2	0.5		MR
24	720	SYDN	45 C	0009	0013	12				
	1400	SYDN	45 C	0010	0018	11				
	9400	TYKW	5 S	0015.5	0017.4	4	52	16		06R
	9400	TYKW	29 PBI	0019.5		20	8	5		
	1420	BOUL	8 S	0015.5	0017	5.5	208	49		
	2695	BOUL	3 S	0015	0019	6.5	102	35		
	1415	MANI	4 S/F	0016.5	0017.4	14.5	210	88.5		
	606	MANI	4 S/F	0016.5	0018.7	6.5	33.6	6		
	2695	MANI	4 S/F	0016.5	0018	11.4	94	28.8		
	8800	MANI	4 S/F	0016.5	0018	8.5	38.4	16.7		
	4995	MANI	4 S/F	0016.5	0018	8.5	69	24.8		
	500	HIRA	45 C	0016.8	0017.7	4.3	95	23		
	1000	TYKW	45 C	0016	0018	5	57	15		MR/06L
	1000	TYKW	29 PBI	0021		25	1.8	0.7		
	3750	TYKW	5 S	0016	0017.6	4	78	28		20R
	3750	TYKW	29 PBI	0020		40	5	2		
	2000	TYKW	45 C	0016	0017.9	5	72	20		04L/10R/10L
	2000	TYKW	29 PBI	0021		70	4	1.3		
	4995	BOUL	8 S	0016	0017	4	51	20		
	2695	PENT	3 S	0016	0017.6	5	105	26.2		
	2695	PENT	29 PBI	0021	0021	31	5	2.5		
	500	HIRA	27 RF	0021.2	0025.5	49	6	2		
	200	HIRA	27 RF	0036	0057	75	60	10		O
	100	HIRA	27 RF	0048	0055	17	10	4		O
	100	HIRA	45 C	0056.8	0057	1	45	20		WL
	3750	TYKW	5 S	0112	0113	8	2	1		OR,296090F
	9400	TYKW	32 ABS	0210	0325	180	-9	-4		
	3750	TYKW	32 ABS	0220	0420	200	-7	-3		296090F
	2000	TYKW	32 ABS	0250	0440	190	-4	-2		
	720	SYDN	45 C	0305.6	0306	0.8				
	500	HIRA	5 S	0306	0306.3	0.6	30	20		
	1400	SYDN	2 S/F	0306.2	0306.3	0.3				
	606	MANI	8 S	0306.2	0306.6	1.1	127	28.4		
	1415	MANI	1 S	0306.5	0306.8	.8	2.2	1.1		
	2000	TYKW	5 S	0306	0306.4	1	6	1.2		50R
	500	HIRA	5 ES	0336.7	0336.7	0.5	47	20		
	606	MANI	8 S	0336.8	0337.1	.9	36.2	7.1		
	720	SYDN	45 C	0356.3	0357.2	3.3				
	1400	SYDN	1 S	0356.5	0357.3	1.3				
	3750	TYKW	5 S	0356.5	0357.1	1.5	2	1		OL,296090F
	100	HIRA	45 C	0356.5	0357	1.5	120	50		WL
	2000	TYKW	5 S	0356.5	0357.5	1.5	7	2.5		50R
	500	HIRA	45 C	0356.8	0357.5	1	70	20		
	200	HIRA	43 NS	0444	0711	246 D	20	10		SL
	100	GORK	44 NS	0500 E		490 D		20		
	200	GORK	44 NS	0500 E		240 D		20		
	260	ONDR	44 NS	0700 E		488 D	7			
	240	KIEL	44 NS	0706 E	0937	594	50	15		
	127	TORN	44 NS	0740 E		440 D				
	160	DWIN	44 NS	0845 E	0900	375 D	70	8		
	250	DWIN	44 NS	0845 E	0915	375 D	20	3		
	169	DWIN	44 NS	0845 E	0900	375 D	70	10		
	200	GORK	44 NS	1000		180		5		
	245	SGMR	44 NS	1043 E	1835.5	733 D	119.9			
	405	KIEL	44 NS	1300	1622	240	65	40		
	410	SGMR	43 NS	1659	1808.6	186	16.7			
	720	SYDN	45 C	0513.6	0514	1.4				
	2000	TYKW	5 S	0513.7	0513.9	0.5	2.5	0.8		50R
	1400	SYDN	2 S/F	0513.8	0514	0.3				
	650	GORK	40 F	0550.7	0552.4	5.6	5.5			
	950	GORK	4 SF	0552.4	0552.5	0.3	9.6	5		
	650	GORK	40 F	0731	0831.9	4.6	4.4	2		
	536	ONDR	2 S/F	0831.6	0831.6	3	25	6		
	9100	GORK	1 S	1059.2	1100.5	4.8	10.7	5.3		
	9240	ARCE	20	1123	1124.1	39				
	536	ONDR	8 S	1233.3	1233.3	1	12	4.2		
	2800	OTTA	21 GRF	1550	1700	110	1.2	0.7		
	7000	SAOP	1	1654.2	1654.8	2.5	9.4	4.8		OLOF
	9240	ARCE	1	1654.2	1654.8	1				
	2800	OTTA	1 S	1659	1659.2	1	0.8	0.4		
	2800	OTTA	21 GRF	1742	1803	65	1	0.5		
	18	MCMA	6 S	1754	1756	3			1	
	18	MCMA	6 S	1813	1814	2			1	
	2800	OTTA	8 S	1817.8	1817.8	0.5	0.4	0.2		

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MAR 1976	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
	1420	BOUL	8 S	1834	1835	1.5	5	2		
	7000	SAOP	1	1835.1E	1835.8U	1 U	5.9	3.1		OLOF
	2695	SGMR	1 S	1835.3	1835.7	1.1	7.4	2.2		
	2800	OTTA	28 PRE	1834.3	1834.5	1	0.4			
	2800	OTTA	1 S	1835.3	1835.7	2.5	7	1.8		
	1415	SGMR	1 S	1835.4	1835.7	2.6	7.1	2.1		
	4995	SGMR	1 S	1835.5	1835.6	.8	3.9	1.2		
	8800	SGMR	1 S	1835.6	1835.8	.5	1.4	.4		
	15400	SGMR	1 S	1835.7	1835.8	.2	4.9	1.5		
	4995	BOUL	8 S	1835	1835.5	1	9	3		
	7000	SAOP	40	1836.1		2				
	2695	BOUL	8 S	1836	1836.5	1.5	6	2		
	2800	OTTA	20 GRF	1850	1908	50	1	0.5		
	500	HIRA	45 C	2042.8	2042.9U	0.5U	3900 U	780 U		
	18	MCMA	6 S	2146	2147	2			1	
	2000	TYKW	5 S	2217.8	2218.2	1	3	1		SR
	2800	OTTA	1 S	2217.8	2218	1	1	0.7		
	1420	BOUL	1 S	2219	2220	1.5	2	1		
	2800	OTTA	2 S/F	2220	2220.6	1	3.8	1.8		
	3750	TYKW	5 S	2220	2220.4	1	2	1		OL
	9400	TYKW	5 S	2220	2220.4	1	10	3		OL
	2000	TYKW	5 S	2220	2220.5	2	7	2		2SR
	1000	TYKW	5 S	2220	2220.4	1.5	1.1	0.3		OR
25	1400	SYDN	45 C	0015.4	0018.7	6.5				
	606	MANI	4 S/F	0015.5	0018.3	6.8	59	9.1		
	720	SYDN	47 GB	0016.1	0017.8	4				
	9400	TYKW	5 S	0016	0018.6	8	54	8		OR
	2695	MANI	4 S/F	0017.7	0018.7	3.5	37.8	17.6		
	8800	MANI	4 S/F	0017.7	0018.6	2.8	37.2	16.9		
	4995	MANI	3 S	0017.8	0018.7	2.7	24.5	11.5		
	1420	BOUL	8 S	0017	0018.5	7.5	22	8		
	4995	BOUL	8 S	0017	0018	3	26	9		
	1415	MANI	4 S/F	0018	0018.7	4.1	34.7	16.8		
	606	MANI	8 S	0018.1	0018.2	.4	2600	995		
	500	HIRA	45 C	0018.1	0018.3	1	350	80		
	1000	TYKW	28 PRE	0016	0016.9	2	1.1	0.2		
	1000	TYKW	45 C	0018	0019.2	6	88	7		05R
	3750	TYKW	5 S	0018	0018.6	4	39	10		20R
	2000	TYKW	28 PRE	0016	0016.7	2	1.2	0.3		
	2000	TYKW	5 S	0018	0018.7	6	38	7		10L
	2695	PENT	28 PRE	0016.3	0016.9	1.7	1.2			
	2695	PENT	3 S	0018	0018.7	2.5	44	15		
	2695	PENT	29 PBI	0020.5	0020.5	5	3.2	1.4		
	2695	BOUL	8 S	0019	0019.5	4	43	18		
	100	HIRA	45 C	0038	0038.8	1.5	50	15		SL
	2695	PENT	2 S/F	0038.2	0039	1.5	3	1.2		
	720	SYDN	4 S/F	0038.3	0038.4	0.8				
	1400	SYDN	2 S/F	0038.7	0039	0.4				
	2000	TYKW	5 S	0038	0038.9	2	4	1		OR
	3750	TYKW	5 S	0038	0038.9	2	3	1		OL
	1000	TYKW	45 C	0038	0038.3	2	1.1	0.3		OR
	1400	SYDN	2 S/F	0057.8	0058.2	0.8				
	720	SYDN	8 S	0058.2	0058.3	0.7				
	1000	TYKW	45 C	0058	0059.2	1.5	45	6		06R
	2000	TYKW	45 C	0058	0058.4	1.5	0.8	0.3		OR
	3750	TYKW	5 S	0058	0058.5	1.5	1.5	0.5		OL
	3750	TYKW	5 S	0128	0129	10	2	1		OL,116092F
	3750	TYKW	45 C	0222	0222.6	10	5	1.5		OL
	200	HIRA	27 RF	0222	0423	240	100	20		O
	100	HIRA	43 NS	0318	0423	332 D	250	42		WLO
	100	GORK	44 NS	0505 E		475 D		15		
	200	GORK	44 NS	0506 E		444 D		5		
	405	KIEL	44 NS	0700 E	1104	600	65	35		
	240	KIEL	44 NS	0700 E	0732	600	60	25		
	260	ONDR	44 NS	0700 E	1228.7	540 D	101	14		
	127	TORN	44 NS	0740 E		440 D				
	250	OWIN	44 NS	1020 E	1240	270 D	190	8		
	169	OWIN	44 NS	1020 E	1240	270 D	150 D	3		
	160	OWIN	44 NS	1020 E	1240	270 D	150 D	2		
	245	SGMR	44 NS	1042 E	1229.2	735 D	108.4			
	410	SGMR	44 NS	1042 E	1224.5	546 D	75.4			
	228	HARS	44 NS	1141	1230 U	134	105	55		
	606	SGMR	43 NS	1346.9	1429.3	346.6	46.6			
	2695	MANI	2 S/F	0357.4	0358.5	2.6	3.3	.7		
	8800	MANI	4 S/F	0357.6	0358.4	2.4	17.5	5.3		
	4995	MANI	4 S/F	0357.6	0358.6	2.4	10.4	3		
	3750	TYKW	21 GRF	0357	0440	243 D	5	2 D		116092F
	9400	TYKW	45 C	0357	0358.3	15	24	6		OL
	3750	TYKW	45 C	0357	0358.4	12	16	4		116092F
	9400	TYKW	21 GRF	0357	0500	243 D	8	5 D		OL
	2000	TYKW	5 S	0358	0401.8	8	1.3	0.6		OR
	2000	TYKW	21 GRF	0358	0540	242 D	2	1 D		OR
	500	HIRA	45 C	0359	0400.6	2	40	8		
	1000	TYKW	45 C	0425	0428.6	10	2.8	0.7		40R

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MAR 1976	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
25	2000	TYKW	5	S	0519	0519.8	2	1	0.3		OR
	3750	TYKW	5	S	0519	0519.7	10	4	1		
	9400	TYKW	5	S	0519	0519.5	2	3	1		OL
	950	GORK			0557.8E		5.2				
	650	GORK	4	S/F	0600.9	0601.8	2.2	9.7			
	9100	GORK	1	S	0608	0608.5	2	15.8	7.9		
	650	GORK	4	S/F	0610.4	0611.6	3	56	7		
	606	MANI	40	F	0610.4	0611.7	3.7	10.9	12.5		
	950	GORK	1	S	0611.2	0611.7	2.2	2.5			
	4995	MANI	1	S	0611.6	0611.8	.9	3	1.5		
	8800	MANI	1	S	0611.6	0611.8	1.8	7	1.8		
	2695	MANI	3	S	0611.6	0611.8	1.5	11.9	5.3		
	1415	MANI	1	S	0611.6	0611.9	1	2.7	.5		
	1000	TYKW	5	S	0611	0611.7	3	4	1		OR
	9400	TYKW	5	S	0611	0611.7	3	11	3		27L
	3750	TYKW	5	S	0611	0611.7	3	12	2.5		
	9100	GORK	21	GRF	0621	0758.5	225	9.9	4.1		
	1470	POTS	4		0702	0705	8.5	25	9.2		
	808	ONDR	45	C	0702.3	0704.3	4	52	11		SUNRISE
	3000	POTS	4		0702.5	0705	5.5	22	8.4		
	9500	POTS	1		0702.5	0704	11	10	3.9		
	1415	MANI	4	S/F	0702.6	0705.2	4.6	21.2	8		
	2695	MANI	4	S/F	0702.7	0705.3	4.5	21.8	7.9		
	9100	GORK	2	SF	0703	0704.7	4	17	8.5		
	650	GORK	40	F	0703.3	0703.4	3	8			
	606	MANI	4	S/F	0703.5	0705.2	3.2	23	3.1		
	1000	TYKW	45	C	0703	0703.9	4	87	9		05R
	2000	TYKW	45	C	0703	0705.3	5	21	7		03L
	2000	TYKW	29	PBI	0708		15	2.6	1		
	3750	TYKW	45	C	0703	0705.3	5	17	6		
	3750	TYKW	29	PBI	0708		10	2	1		
	9400	TYKW	5	S	0703	0704.2	3	11	5		OL
	9400	TYKW	29	PBI	0706		15	2	1		
	950	GORK	46	C	0704.2E	0704.8	2.7	22			
	950	GORK			0704.2E	0705.6		19			
	2950	GORK	1	S	0704.9	0705.9	3.6D	15			
	536	ONDR	8	S	0705.4	0705.4	1.5	20	2.8		
	1000	TYKW	45	C	0735.9	0736.2	0.7	17	4		OR
	950	GORK	1	S	0848.1	0848.3	0.4	2.7			
	100	GORK	41	F	1022.1	1023.5	11	20			
	100	GORK			1022.1	1031.6		20			
	9240	ARCE	22		1037.4U	1220.7	306 U				
	9240	ARCE			1037.4U	1220.7	151 U				
	9100	GORK	23	GRF	1051.5	1236	240 D	32.8	4.2		
	7000	SAOP	1		1109.2	1109.6	1.1	4.4	2.2		BLOF
	9500	POTS	21		1125	1251	200	17			
	510	POTS	45		1130	1316.5	146	220			
	7000	SAOP	21		1132.7	1220.4	170.6	134.4			BLOF
	3000	POTS	21		1133	1300	187	8.1			
	4995	SGMR	22	GRF	1134.9	1139.4	10.3	11.9	7.1		
	8800	SGMR	4	S/F	1135.3	1138.7	6.7	15.6	4.7		
	9500	POTS	3		1135.5	1139	5	14			
	2695	SGMR	2	S/F	1135.7	1139.4	6.4	7.3	2.2		
	1415	SGMR	1	S	1136	1139.4	5.7	.4	.1		
	3000	POTS	3		1136.5	1139.3	4	8.6			
	234	POTS	45		1136	1315	204 D	100			
	15400	SGMR	2	S/F	1137	1138.9	3.2	9	2.7		
	9100	GORK	1	S	1137	1138	3.5	14.2	7		
	7000	SAOP	2		1137.2	1138.1	3.6	12	6.4		BLOF
	950	GORK	23	GRF	1137.5	1316.7U	202 D	86			
	650	GORK	40	F	1137.5	1139.4	12.8	5.4			
	1470	POTS	1		1137	1137.8	2.5	1.5			
	536	ONDR	49	GB	1138.5	1316.3	116	306	35		
	536	ONDR				1152.3		36			
	536	ONDR				1220.8		39			
	536	ONDR	29	PBI	1334	1431	146	57	20		
	606	SGMR	3	S	1139.2	1139.3	.3	10.9	3.3		
	800	KIEL	46	C	1140	1224.5	87	70	30		MR
	602	KIEL	46	C	1140	1221	86	20	15		MR
	405	KIEL	46	C	1140	1225	86	80	65		MR
	240	KIEL	46	C	1140	1315	200	260	100		MR
	200	GORK	27	RF	1145	1220.3	64.7	250			
	160	DWIN	27	RF	1145	1240	150	150 D	100		
	250	DWIN	27	RF	1145	1240	150	190	100		
	169	DWIN	27	RF	1145	1240	150	150 D	100		
	260	ONDR	49	GB	1145	1228.7	120	101	34		
	606	SGMR	22	GRF	1147.7	1220.8	66.3	37.6	22.6		
	8800	SGMR	22	GRF	1148.7	1220.2	61.6	72.7	43.6		
	2695	SGMR	22	S/F	1149	1220.6	66.3	110	33		
	1415	SGMR	46	C	1149.1	1214.2	64.3	110	33		
	1415	SGMR	46	C		1215.5		94.2			
	1415	SGMR	46	C		1216.8		95.5			
	4995	SGMR	22	GRF	1149.4	1220.5	58.8	90.4	54.3		
	15400	SGMR	22	GRF	1150.2	1220.3	59.6	62.7	37.6		
	2950	GORK	21	GRF	1150.4	1318.5	152 U	79	32		

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25	650	GORK	23 GRF	1150.5	1214.8	189 D	14.5			
	3000	POTS	4	1150	1152.5	5.5	10			
	1470	POTS	4	1151 U	1216.5	55	83			
	113	POTS	45	1151	1350	189 D	56			
	100	GORK	6 S	1154.4	1154.6	0.9	20			
	9400	HUAN	20	1156	1157.4	4.5	16.8	5.6		O
	9100	GORK	1 S	1156.3	1157	3	11.4	5.7		
	9500	POTS	3	1156	1157	4	17			
	7000	SAOP	1	1158.9	1159.9	2.6	6.8	3.4		BLOF
	127	TORN	25 R	1159.5	1241.5	138 D	240	110		
	808	ONDR	49 GB	1200	1316	96	450	100		
	808	ONDR			1218.8		65			
	808	ONDR			1238		50			
	808	ONDR	29 PBI	1335.5		115	35	10		
	930	BORD	45 C	1200		152	130 D			
	1420	KIEL	46 C	1200	1214	48	210	90		MR
	1030	KIEL	46 C	1200	1229	60	110	60		MR
	100	GORK	27 RF	1201.3	1301	160	360	110		
	3000	POTS	4	1206.2	1220	48	86			
	9400	HUAN	22	1207.8	1220.1	35.2	72.5	19.5		28L
	9100	GORK	46 C	1208.5	1220	27.8	91			
	9100	GORK		1208.5	1224.3		61			
	7000	SAOP	21	1209	1220.4	115.2	131			BLOF
	950	GORK	46 C	1214	1228.8	40	160			
	950	GORK		1214	1232.7		129			
	950	GORK		1214	1239.5		66			
	2950	GORK	45 C	1214.4	1220.6	18.6	98	47		
	2950	GORK		1214.4	1225.6		62			
	7000	SAOP	1	1214.8		20.4	84.4	44.8		BLOF
	9500	POTS	4	1214	1220	30	60			
	650	GORK	46 C	1215.5	1220.8	11.8	25			
	650	GORK		1215.5	1223.7		27			
	7000	SAOP	3	1217.2	1220.4	5.5	43.1	25.8		BLOF
	2800	OTTA		1231		16 D	31			
	2800	OTTA	30 PBI	1247	1247	262	12.4	6.2		
	650	GORK	46 C	1235.2	1237.7	7.7	18			
	650	GORK		1235.2	1240		11			
	2695	BOUL	45 C	1256.5E	1319	46 D	88	20		
	4995	BOUL	45 C	1257.5E	1319	35 D	38	9		
	606	SGMR	47 GB	1259.5	1310.6	47.4	286.1	247.5		
	606	SGMR	47 GB		1317		825			
	245	SGMR	6 S	1301.2	1314.3	39.8	80.9	24.3		
	1420	BOUL	45 C	1301.5E	1320.5	34 D	67	19		
	410	SGMR	49 GB	1302.2	1316.7	42.5	515.2	213.6		
	410	SGMR	49 GB		1317		712.1			
	650	GORK	1 S	1302.8	1304.5	3.5	18	9		
	602	KIEL	47 GB	1307	1317	39	460	95		MR
	405	KIEL	47 GB	1307	1317	36	490	100		MR
	2695	SGMR	46 C	1308.2	1317.9	43.8	119.7	35.9		
	2695	SGMR	46 C		1320.6		84.3			
	2800	OTTA	4 S/F	1308.5	1317.5	39.5	96	29		
	950	GORK	46 C	1308.5	1316.9	24.5	388			
	950	GORK		1308.5	1327.6		140			
	950	GORK		1308.5	1320.2		182			
	650	GORK	47 GB	1308.6	1317.1	18.6	854			
	4995	SGMR	22 GRF	1308.8	1319.5	36	56.1	33.7		
	1030	KIEL	47 GB	1308	1317	40	140	80		MR
	800	KIEL	47 GB	1308	1317	39	480	110		MR
	1420	KIEL	47 GB	1308	1318	40	220	90		MR
	1470	POTS	4	1308	1317.5	40	118			
	3000	POTS	4	1308	1317.8	42	95 U			
	510	POTS	45	1308	1316.5	30	220			
	9240	ARCE		1309	1320.7	155				
	7000	SAOP	4	1310.1	1310.7	3.2	25.8	17.2		BLOF
	9800	SGMR	22 GRF	1310.2	1320.5	34.3	35	21		
	1415	SGMR	46 C	1310.6	1317.8	37.8	74.1	22.8		
	1415	SGMR	46 C		1320.5		76.2			
	15400	SGMR	20 GRF	1313	1321.1	31.2	21.8	13.1		
	7000	SAOP	20	1313.3		29.5	80.1	44.4		BLOF
	9400	HUAN	20	1314.7	1320.6	31.5	44	10.7		20L
	2950	GORK	4 S/F	1315	1317.8	3.5	130 D			
	9100	GORK	3	1315	1320.5	17	48	21		
	9500	POTS	3	1315	1320	25	40			
	950	GORK	3 S	1349.2	1351	5.2	40	20		
	650	GORK		1419.6	1429		22			
	650	GORK	46 C	1419.6	1421.8	13.9	13.8			
	2800	OTTA	23 GRF	1710	1725	80	2.2	1.1		
	2800	OTTA	1 S	1714.8	1715.7	1.5	2	1		
	1420	BOUL	8 S	1714	1715	2	4	1		
	18	HOMA	6 S	1715	1716	1			1	
	2695	BOUL	45 C	1716	1720.5	6.5	7	2		
	1420	BOUL	8 S	1717	1718.5	2	4	1		
	2800	OTTA	1 S	1718	1719.1	2	5.8	1.5		
	1420	BOUL	45 C	1727.5	1729	3	6	2		
	245	SGMR	6 S	1828.1	1828.2	.4	8.4	2.5		

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25	1415	SGMR	1 S	1828.1	1828.1	.2	1.3	.4		
	410	SGMR	6 S	1828.2	1828.3	.2	1.8	.5		
	606	SGMR	3 S	1828.2	1828.2	.1	17.6	5.3		
	2800	OTTA	20 GRF	1845	1915	85	1.6	0.8		
	18	MCMA	6 S	2014	2015	1			1	
	2800	OTTA	8 S	2041.7	2041.7	0.1D	1.6			
	8800	SGMR	3 S	2055	2055.2	2.1	18.2	5.5		
	15400	SGMR	3 S	2055	2055.3	3.8	56	16.8		
	18	MCMA	42 SER	2142	2204	83			1	
	1400	SYDN	45 C	2211.1	2211.1	2.8				
	720	SYDN	45 C	2211.2	2212.1	1.5				
	2800	OTTA	20 GRF	2211	2213	30	1.4	0.7		
	2695	PENT	24D R	2230	2305	35	2	1		
	2695	PENT	24P R	2305		150	2			
	100	HIRA	45 C	2318	2318.4	1	110	30		O
	9400	TYKW	45 C	2327.5	2331.7	6	13	5		OL
	100	HIRA	45 C	2327.7	2328.3	1	120	60		O
	1420	BOUL	45 C	2328	2331	6.5	4	1		
	1415	MANI	4 S/F	2330	2331.7	2.2	13.2	4.2		
	1000	TYKW	45 C	2330	2331.7	3	12	2		OR
	2000	TYKW	5 S	2330	2332 .	3	2	1		OR
	720	SYDN	45 C	2331.1	2331.7	1				
	1400	SYDN	45 C	2331.2	2331.8	0.8				
	606	MANI	2 S/F	2330.9	2331.6	2.3	5.7	1.5		
26	2000	TYKW	45 C	0000	0001.6	4	2	0.7		OR
	3750	TYKW	45 C	0000	0002.7	4	2	1		OL
	2695	PENT	20 GRF	0000	0035	80	2	1		
	1400	SYDN	45 C	0001	0001.7	1.8				
	1000	TYKW	40 F	0006	0006.2	0.3	8	2		OR
	9400	TYKW	5 S	0033.5	0034.4	5	20	7		4OL
	8800	MANI	1 S	0034.3	0034.6	5.2	10.1	3.4		
	200	HIRA	43 NS	0040	0607	490 D	40	10		ML
	500	HIRA	24 R	0137	0211	440 D	10	3		
	9400	TYKW	5 S	0142	0147	20	3	1		OL
	3750	TYKW	5 S	0142	0147	35	1.5	0.5		OL,116084F
	720	SYDN	8 S	0157.6	0157.7	0.3				
	100	HIRA	45 C	0304.5	0304.6	2	50	20		O
	100	HIRA	45 C	0307.7	0308.5	2	120	40		O
	100	HIRA	45 C	0314	0316.3	3	230	70		WRWL
	2000	TYKW	5 S	0406	0406.4	1	0.7	0.2		OR
	3750	TYKW	5 S	0406	0406.3	1	2	0.5		116084F
	8800	MANI	4 S/F	0413.4	0414.3	1.8	16.1	3.6		
	4995	MANI	2 S/F	0413.4	0414.3	1.8	4.8	1.2		
	2695	MANI	2 S/F	0413.4	0414.3	1.7	3.8	1.3		
	1415	MANI	1 S	0413.6	0414.3	1.9	.5	.3		
	606	MANI	2 S/F	0413.7	0414.4	1.5	6.9	2.1		
	1000	TYKW	45 C	0413.7	0414.3	1.5	1.3	0.3		OR
	500	HIRA	45 C	0413.7	0414.4	1	35	12		
	3750	TYKW	5 S	0413	0414.2	4	6	1		116084F
	100	HIRA	45 C	0414	0414.1	1	1300 D	300 D		WL
	2000	TYKW	45 C	0414	0414.3	3	1.8	0.4		OR
	9400	TYKW	5 S	0416.5	0416.7	0.8	11	4		OL
	200	GORK	44 NS	0451 E		489 D		10		
	100	GORK	44 NS	0454 E		486 D		10		
	260	ONDR	44 NS	0700 E		490 D	104	10		
	240	KIEL	44 NS	0704 E	1341.5	596	800	100		
	405	KIEL	44 NS	0704 E	1444	596	95	40		
	127	TORN	44 NS	0740 E		440 D				
	169	DWIN	44 NS	0820 E		340 D		20		
	160	DWIN	44 NS	0820 E		340 D		15		
	259	DWIN	44 NS	0820 E		340 D		35		
	250	DWIN	44 NS	0820 E		340 D		30		
	410	SGMR	44 NS	1040 E	1751.2	739 D	185.8			
	245	SGMR	44 NS	1040 E	1319.7	739 D	135.8			
	606	SGMR	43 NS	1400	1956	539 D	9.4			
	100	HIRA	44 NS	2040 E	2043	730 D	800	90		SR
	200	HIRA	44 NS	2040 E	2309	730 D	110	40		SL
	650	GORK	22 GRF	0515.9	0528.4	43 D	5.3	3.1		
	9100	GORK	2 SF	0542.5	0543.8	4	6	3		
	100	HIRA	45 C	0605.9	0606.1	1	240	100		WL
	100	GORK	41 F	0628.4	0629.1U	2.6	25			
	100	GORK		0628.4	0630.7		25 D			
	8800	MANI	3 S	0656.1	0657.6	3.3	39.4	16.1		
	2695	MANI	1 S	0656.1	0657.8	3.7	3.8	1.3		
	1416	MANI	1 S	0656.1	0657.6	3.3	2.1	1.1		
	9100	GORK	21 GRF	0656.3	0724.3	259	10.8	5.2		
	4995	MANI	3 S	0656.4	0657.6	3.6	15.7	8.5		
	606	MANI	2 S/F	0656.9	0659.3	4.2	3.2	1.1		
	3750	TYKW	45 C	0656	0658.9	9	10	3		
	3750	TYKW	29 PBI	0705		14	2	2		
	9400	TYKW	45 C	0656	0657.6	6	18	9		2OL
	9400	TYKW	29 PBI	0702		17	7	5		
	9100	GORK	2 S	0657	0658.2	3.2	19.5			
	2000	TYKW	45 C	0717	0720.7	7	12	3		07L

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26	2000	TYKW	29 PBI	0724		36 D	2	2 D		
	3000	POTS	4	0718.5	0720.4	22	30 U	8.9U		
	8800	MANI	4 S/F	0719.3	0720.7	7.1	220	63		
	4995	MANI	4 S/F	0719.5	0720.7	6	85	30.3		
	9100	GORK	4 SF	0719.5	0720.3	5.8	206			
	1415	MANI	1 S	0719.6	0720.7	3.6	4.2	1.1		
	2695	MANI	4 S/F	0719.6	0720.7	4.2	27.7	9.5		
	2950	GORK	3 S	0719.8	0720.8	1.2D	18			
	1470	POTS	2	0719	0720.5	5	4.4	1.2		
	9500	POTS	4	0719	0719.8	20	147	58		
	9400	TYKW	45 C	0719	0720.7	7	200	40		20L
	9400	TYKW	29 PBI	0726		34 D	14	9 D		
	3750	TYKW	45 C	0719	0720.7	7	55	13		
	3750	TYKW	29 PBI	0726		34 D	5	4 D		
	606	MANI	2 S/F	0720.1	0721.4	2.9	1.6	.5		
	650	GORK	1 S	0721.2	0721.3	1.8	2.2	1.1		
	9100	GORK	2 SF	0757	0757.5	7.3	9.3	4.4		
	9240	ARCE	20	0819.7	0822	11.5				
	2950	GORK	20 GRF	0834.9	0836.9	10.1	7	3		
	9240	ARCE	21	0835.1	0908.1	84				
	950	GORK	20 GRF	0835.8	0836.8	16.7	5.5	2.5		
	9240	ARCE	1	0836.4	0837.6	2				
	9100	GORK	1 S	0836.5	0837.5	1.8	6.5	3.2		
	650	GORK	23 GRF	0836.7	0850.4	16.6	2.3	1.2		
	200	GORK	4 S/F	0837.2	0838.3	2.2	300			
	650	GORK	4 S/F	0838.8	0839.4	1.3	5.5	2.8		
	650	GORK	4 S/F	0846.9	0847.4	1	5.1	2.6		
	9500	POTS	1	0855.5	0856.8	5.5	6.5			
	9100	GORK	1 S	0856.3	0857	3.3	6.5	3.2		
	9240	ARCE	1	0856.7	0857.2	3.4				
	950	GORK	1 S	0914.2	0915.9	5.1	1.7			
	100	GORK	6 S	0933.1	0933.9U	1.1	350 D			
	200	GORK	8 S	0933.2	0933.3	0.4	280	140		
	113	POTS	40	0933.2	0933.2	0.8	3000	120		
	9100	GORK	1 S	0940.3	0942	5.5	6.5	3.2		
	100	GORK	41 F	1034.4	1036.3U	13.2	20 D			
	100	GORK		1034.4	1040.9U		20 D			
	100	GORK		1034.4	1046 U		20 D			
	9240	ARCE		1036.5	1041.1	9.5				
	9240	ARCE	45	1036.5	1047.3	20				
	408	TRST	42	1037.8	1039.6	2.3	48			
	808	ONDR	8 S	1038.6	1038.6	0.3	22			
	536	ONDR	4 S/F	1038.8	1038.8	2	15	3.5		
	950	GORK	3 S	1038.9	1039.1	0.4	36	18		
	650	GORK	1 S	1039	1039.1	0.4	23	8.7		
	9100	GORK	1 S	1046	1047.8	3	8.9	4.4		
	9240	ARCE		1046	1047.3	10.5				
	113	POTS	45	1047.1	1047.1	0.1	200	40		
	100	GORK	27 SF	1048.9	1100 U	48.2	350 D			
	100	GORK	41 F	1112.8	1113.2	1.5	350			
	100	GORK	41 F	1141.2	1141.4	2.8	350			
	100	GORK		1141.2	1143.7		320			
	113	POTS	45	1146.5	1146.5	0.1	300	100		
	2800	OTTA	21 GRF	1240	1340	170	1	0.5		
	113	POTS	45	1241.4	1241.4	0.1	175	40		
	9240	ARCE	22	1254.7U	1309.8	33.5				
	113	POTS	40	1329	1329.2	0.4	2400	200		
	113	POTS	40	1339.8	1340.6	1.9	6000	600		
	234	POTS	40	1339	1340.6	1.9	650	3		
	113	POTS	40	1351.5	1351.6	0.1	420	40		
	113	POTS	45	1406.5	1406.6	0.2	200	20		
	9500	POTS	4	1438.5	1443.2	14	105	25		
	1420	BOUL	45 C	1438.5	1443.5	7	44	13		
	1470	POTS	4	1439	1444	8	44	12		
	2695	SGMR	4 S/F	1439.1	1443.6	19.3	46.1	13.8		
	15400	SGMR	4 S/F	1439.2	1444	13.9	79.2	23.8		
	9400	HUAN	28	1439.2	1441.2	3.7	45.3	14		23L
	7000	SAOP	28	1439.2		1.5U	7	7		
	245	SGMR	6 S	1439.2	1439.8	7.5	43.5	13.1		
	8800	SGMR	4 S/F	1439.3	1443.5	20.1	118.2	35.5		
	606	SGMR	46 C	1439.3	1444.4	6.9	45.1	13.5		
	606	SGMR	46 C		1444.7		42			
	9240	ARCE		1439.3	1441.3	3.1				
	9240	ARCE	46	1439.3	1443.7	9.1				
	1415	SGMR	46 C	1439.5	1443.2	11.6	30.1	21.5		
	1415	SGMR	46 C		1443.9		71.7			
	3000	POTS	4	1440.5	1443.7	15	43 U	15 U		
	2800	OTTA	4 S/F	1440.7	1443.5	12.3	45	7		
	2800	OTTA	29 PBI	1453	1453	12	1.8	0.9		
	7000	SAOP	46	1440.7U	1443.5	5.5U	219.3	86.6		BLOF
	4995	SGMR	4 S/F	1440.8	1443.3	28	106.9	32.1		
	4995	BOUL	45 C	1440	1443	5.5	77	30		
	536	ONDR	46 C	1441.5	1449.3	5	32	10.4		
	2695	BOUL	45 C	1441.5	1444.5	6.5	35	12		
	410	SGMR	6 S	1441.9	1444.5	4.1	17.6	5.1		

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MAR 1976	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
	808	ONDR	45 C	1441	1444.4	5	34	6.4		
	930	BORD	45 C	1441	1444.5	5	130 D			
	9240	ARCE		1442.4	1443.7	6				
	9400	HUAN	45	1442.9	1443.7	2.5	132.1	66.9		40L
	18	MCMA	6 S	1444	1445	2			1	
	9400	HUAN	29	1445.4	1445.4	9.9	28.9	10.9		12L
	7000	SAOP	29	1446.2		12.2		9.5		BLOF
	9240	ARCE	29	1448.4		18.5				
	9240	ARCE	22	1506.6	1520	31.4				
	8800	SGMR	1 S	1518.7	1519.2	3.9	7.8	2.3		
	2695	SGMR	1 S	1519.4	1519.9	1	2.6	.8		
	1415	SGMR	2 S/F	1519.6	1521	7.6	6.3	1.9		
	4995	SGMR	1 S	1519.7	1519.8	3.2	4.8	1.4		
	606	SGMR	2 S/F	1519.7	1519.8	.5	2.8	.8		
	2800	OTTA	1 S	1519.9	1520	1	0.6	0.3		
	2800	OTTA	21 GRF	1530	1830	570	9.8	4.9		
	2800	OTTA	1 S	1704.5	1706.7	5.5	1.8	1.2		
	7000	SAOP	20	1712.6		2.4		2.8		
	2800	OTTA	1 S	1717.5	1718	1.5	1	0.5		
	7000	SAOP	20	1719.6		2.6		4.6		BLOF
	7000	SAOP	22	1722.2		13.4		4.6		
	1000	TYKW	40 F	2359.5	2359.6	1.7	25	1		OR
27	8800	MANI	3 S	0011.5	0011.7	2	16.9	6.8		
	4995	MANI	1 S	0011.5	0011.7	1.3	8.8	2.5		
	4995	MANI	3 S	0021.2	0021.5	.7	25	10		
	9400	TYKW	5 S	0102	0105	15	6	2		OL
	3750	TYKW	5 S	0103	0115	35	2	1		116071F
	3750	TYKW	5 S	0318	0321.5	20	2	1		OL,116071F
	100	GORK	44 NS	0500 E		390 D	330			
	200	GORK	44 NS	0500 E		390		15		
	240	KIEL	44 NS	0550 E	1438	670	400	70		
	127	TORN	44 NS	0620 E		520 D				
	260	ONDR	44 NS	0712 E		471 D	77	16.8		
	200	HIRA	44 NS	2040 E	2214	730 D	140	50		SL
	100	HIRA	44 NS	2040 E	2102	224 D	50	20		SR
	9100	GORK	3 S	0600.5	0601	7	23	11		
	8800	MANI	3 S	0600.7	0601.3	3.1	15.8	2		
	4995	MANI	1 S	0600.7	0601.3	3.1	7.8	1.1		
	100	GORK	2 SF	0601	0601.6	0.7	330			
	9100	GORK	3 S	0627.3	0628	6.3	14.4	7.2		
	8800	MANI	1 S	0627.5	0628.1	4.1	7.9	2		
	2695	MANI	2 S/F	0627.5	0628.1	4.3	4.4	1.2		
	4995	MANI	2 S/F	0627.5	0628.1	3	5.6	1.1		
	950	GORK	1 S	0627.6	0627.9	1.8	6.1			
	2950	GORK	1 S	0627.6	0628.1	3.3	4.8	1.9		
	3750	TYKW	5 S	0627	0628	11	2	1		OL
	9400	TYKW	5 S	0627	0629	11	9	3		OL
	650	GORK	1 S	0628.8	0629	1.5	1.5	0.8		
	100	GORK	41 F	0632.8	0634	55.2	380			
	100	GORK		0632.8	0655.4		380			
	100	GORK		0632.8	0726.5		380			
	100	HIRA	45 C	0726	0726.4	1.5	500	150		WL
	950	GORK	1 S	1012.1	1012.2	0.4	5.2	2.5		
	950	GORK	1 S	1030.8	1031.7	2.2	2			
	200	GORK	8 S	1031	1031.3	0.9	800			
	9100	GORK	1 S	1031	1031.3	2.3	3.5	1.7		
	650	GORK	1 S	1031.3	1031.5	1.1	1.3	0.8		
	9240	ARCE	22	1031.3	1032.2	16				
	100	GORK	6 S	1036.6	1031.5U	1.3	550 D			
	245	SGMR	44 NS	1038 E	1230	742 D	156.9			
	100	GORK	6 S	1054.9	1055.3	1	535			
	536	ONDR	8 S	1115.3	1115.3	0.3	20			
	2800	OTTA	21 GRF	1200	1215	255	7	1.8		
	1030	KIEL	45 C	1200	1204	10	260	90		
	405	KIEL	45 C	1200	1205	12	105	75		
	240	KIEL	45 C	1200	1204	12	300	100		
	2695	SGMR	46 C	1201.2	1203.9	69.9	20.2	10.8		
	2695	SGMR	46 C		1204.9		27			
	808	ONDR	45 C	1201.3	1204	7.5	98	21.7		
	245	SGMR	6 S	1201.3	1204.2	12.7	131.2	26.2		
	9240	ARCE		1201.4	1204	3				
	9240	ARCE	46	1201.4	1207.6	9.2				
	1470	POTS	4	1201.5	1204	21	68			
	4995	SGMR	46 C	1201.6	1204.7	96.6	45.4	18.2		
	4995	SGMR	46 C		1207.5		43.8			
	930	BORD	45 C	1201.8	1207.1	7.2	84	9		
	1415	SGMR	46 C	1201.8	1203.1	77.1	36.7	37.1		
	1415	SGMR	46 C		1203.9		92.7			
	8800	SGMR	46 C	1201.8	1203.7	31.2	41.8	18.4		
	8800	SGMR	46 C		1207.3		46.1			
	3000	POTS	46	1201	1204.9	19 U	24 U			
	9500	POTS	46	1201	1207.2	42	35	8.8		
	500	KIEL	45 C	1201	1204	9	500	95		
	510	POTS	45	1202	1207	10	56	7		

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27	410	SGMR	6 S	1202	1207.6	8	84	33.6		
	536	ONDR	46 C	1202.5	1207.7	10	67	15.5		
	408	TRST	45	1202.7	1204.8	9	100	15		
	606	SGMR	46 C	1202.7	1203.9	9.2	103.7	41.5		
	606	SGMR	46 C		1207.6		95			
	7000	SAOP	46	1202.7U	1204.4U	5.6U	63 U			BLOF
	1420	KIEL	45 C	1202	1203.5	8	290	140		
	602	KIEL	45 C	1202	1204	8	140	30		
	234	POTS	45	1203.8	1204.9	0.7	120	10		
	2800	OTTA	46F C	1203	1204.6	6	21.2	7.1		
	9240	ARCE		1204.4	1204.8	2.4				
	9240	ARCE		1206.8	1207.6	3.8				
	9240	ARCE	29	1210.6		29.5				
	2800	OTTA	40 F	1217	1219.1	2.5	22.4			
	536	ONDR	8 S	1225.5	1225.5	0.2	18			
	7000	SAOP	1	1325.2	1325.9	2.1	8	2.2		BLOF
	18	MCMA	6 S	1344	1345	1			1	
	9240	ARCE	22	1352.1	1440.1	114				
	2800	OTTA	21 GRF	1405	1417	70	3.4	1.7		
	536	ONDR	8 S	1405	1405	0.3	22			
	1420	BOUL	8 S	1437.5	1438	2	2	1		
	7000	SAOP	21	1437.7	1438.8	12.3	12.6	6.8		BLOF
	7000	SAOP	1	1438.4	1438.8	0.9	8.9	4.4		BLOF
	2800	OTTA	1 S	1438.5	1439	3	2.4	0.8		
	7000	SAOP	2	1439.3	1439.9	1	5.3	2.7		BLOF
	2695	BOUL	1 S	1439	1439.5	1.5	2	1		
	2800	OTTA	27 RF	1750		115	1.2	1.1		
	2800	OTTA	24 R	1750	1800	10	1.2	0.6		
	2800	OTTA	24P R	1850		100	1.2			
	2800	OTTA	26 FAL	1940	1945	5	1.2	0.6		
	2800	OTTA	240 R	1945	2020	35	3	1.5		
	2800	OTTA	24P R	2020		160	3			
	8800	SGMR	4 S/F	2042.8	2043.5	4.2	51.5	15.5		
	4995	BOUL	45 C	2042	2043	6.5	17	4		
	606	SGMR	2 S/F	2043	2044.1	4.1	2.6	.8		
	9400	HUAN	4	2043.2	2043.8	11.1	50.3	10.9		41L
	4995	SGMR	4 S/F	2043.4	2043.6	3.6	10.2	3.1		
	2695	SGMR	2 S/F	2043.4	2043.7	3.7	4.8	1.4		
	2800	OTTA	8 S	2043.5	2043.7	0.5	3.4	0.8		
	1420	BOUL	1 S	2043.5	2044	1	3	1		
	1415	SGMR	4 S/F	2043.6	2046.5	3.7	157	47.1		
	2695	BOUL	8 S	2044.5	2045	1	6	2		
	1420	BOUL	8 S	2045	2046	1.5	84	31		
	2800	OTTA	8 S	2046.1	2046.4	0.6	1.4	0.7		
	18	MCMA	42 SER	2145	2210	26			1	
	100	HIRA	45 C	2253	2253.4	1	350	100		WRWL
	2695	PENT	240AR	2300	2345	45	2.4	1.2		
	1420	BOUL	3 S	2326.5	2327.5	1.5	2	1		
	500	HIRA	45 EC	2327	2327	2	18	4		
	100	HIRA	45 C	2327	2327.2	2	850	100		WRWL
	1000	TYKW	5 S	2327	2327.8	2	1.3	0.4		MR
	2000	TYKW	5 S	2327	2327.7	3	1.5	0.5		SR
	9400	TYKW	5 S	2327	2327.2	2	10	3		OL
	2695	PENT	1 S	2327	2328	3	2.6	1.3		
	2695	BOUL	45 C	2328.5	2329	1	3	1		
	2695	PENT	1 S	2340.2	2340.8	2	2.4	1.2		
	2695	PENT	24P R	2345		60 D	2.4			
	8800	MANI	1 S	2340.2	2340.5	1.3	7.6	1.9		
	100	HIRA	45 C	2340.2	2340.5	1.5	1300	250		WRWL
	4995	MANI	1 S	2340.2	2340.5	1.3	7.3	2.4		
	1415	MANI	2 S/F	2340.3	2340.4	1.3	5.8	1.2		
	2695	MANI	1 S	2340.3	2340.5	1.3	2.5	.6		
	1420	BOUL	1 S	2340	2340.5	2	3	1		
	1000	TYKW	5 S	2340	2340.8	4	2.1	0.6		OR
	9400	TYKW	5 S	2340	2340.7	3	9	3		2OL
	2000	TYKW	5 S	2340	2340.8	4	4	1		2OR
	3750	TYKW	5 S	2340	2340.7	3	3	1		2OL
	2695	BOUL	2 SF	2341.5	2342	1	3	1		
28	2000	TYKW	21 GRF	0040	0052	65	1.9	0.9		OR
	2695	PENT	20 GRF	0043	0048	40	2.4	1.2		
	3750	TYKW	21 GRF	0044	0050	65	4	1.5		25L,116057F
	9400	TYKW	20 GRF	0044	0100	45	5	2		OL
	3750	TYKW	5 S	0137	0137.5	1.5	3	1		OL,116057F
	2000	TYKW	5 S	0137	0137.5	2	1.9	0.5		
	1000	TYKW	45 C	0137	0137.4	2	2.4	0.8		2OR
	9400	TYKW	5 S	0137	0137.4	1	3	1		OL
	1000	TYKW	32 ABS	0200	0320	160	-2	-0.9		
	2000	TYKW	32 ABS	0200	0315	170	-2.7	-1.3		
	3750	TYKW	32 ABS	0210	0315	170	-4	-2		116057F
	9400	TYKW	32 ABS	0215	0300	70	-3	-1		
	100	GORK	44 NS	0457 E		213 D		10		
	200	GORK	44 NS	0457 E		39.3		15		
	100	HIRA	43 NS	0549	0609	140 D	65	25		SL
	240	KIEL	44 NS	0552 E	1019	668	340	130		

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28	127	TORN	44 N$	0640 E		500 D				
	260	ONDR	44 N$	0740 E		440 D	118	17		
	410	SGMR	44 N$	1036 E	1343.1	745 D	9.2			
	245	SGMR	44 N$	1036 E	1135.9	745 D	159.5			
	200	HIRA	44 N$	2040 E	2116	730 D	50	10		SL
	100	HIRA	44 N$	2040 E	2052	730 D	700	80		SR
	650	GORK	41 F	0527	0527.9	8.1	5.4			
	650	GORK		0527	0532.5		6.6			
	650	GORK		0527	0534.5		11.9			
	606	MANI	2 S/F	0527.5	0534.6	9.6	9.2	1.6		
	500	HIRA	5 S	0527.8	0527.9	0.3	16	8		
	100	GORK	41 F	0528.5	0529	11.4	700			
	100	GORK		0528.5	0540		380			
	100	GORK		0528.5	0534.6		550			
	8800	MANI	1 S	0528.7	0529	7.6	8.6	2.2		
	2695	MANI	1 S	0528.7	0534.7	8.3	4.9	1.2		
	1415	MANI	1 S	0528.7	0534.7	8.3	2.6	.5		
	4995	MANI	1 S	0528.7	0534.7	8.3	6	1.2		
	200	GORK	8 S	0528.8	0529.1	0.6	1500			
	100	HIRA	45 EC	0528.8	0528.9	0.8	900	250		O
	2000	TYKW	21 GRF	0530	0750 .	150 D	4	2 D		OR
	950	GORK	41 F	0531.5	0532.1	4	3.7			
	950	GORK		0531.5	0534.6		4.6			
	9100	GORK	1 S	0531.8	0532.5	3.5	8	4		
	500	HIRA	45 C	0534	0534.5	0.7	12	7		
	2950	GORK	1 S	0534.3	0534.7	1.3	3.2	1.5		
	2000	TYKW	5 S	0534.3	0534.7	1.5	1.5	0.5		25R
	1000	TYKW	5 S	0534	0534.6	2	3	1		20R
	3750	TYKW	5 S	0534	0534.6	2	5	2		20L
	100	HIRA	45 C	0539.5	0540	1	120	30		SL
	8800	MANI	46 C	0550.3	0556.3	24.7	174	43		
	8800	MANI	46 C		0602.2		58			
	4995	MANI	46 C	0550.3	0556.4	25.7	120	32.4		
	4995	MANI	46 C		0602.2		46.8			
	2695	MANI	46 C	0553.4	0556.4	22.6	48.8	18.9		
	2695	MANI	46 C		0602.2		37.8			
	1415	MANI	46 C	0553.4	0602.2	26.6	136	33.3		
	1415	MANI	46 C		0608		78.5			
	606	MANI	46 C	0554	0602.5	26	220	49.1		
	606	MANI	46 C		0608		190			
	9100	GORK	46 C	0554	0556.5	15	139			
	9100	GORK		0554	0602		30			
	9100	GORK		0554	0608		14.5			
	2950	GORK	45 C	0554.5	0556.3	17	47	17.6		
	2950	GORK		0554.5	0602.1		41			
	2950	GORK		0554.5	0608.1		18.6			
	100	GORK	41 F	0554.6	0554.9	4.3	700			
	100	GORK		0554.6	0559.5		700			
	800	KIEL	8 S	0554	0602.5	16	140	50		
	950	GORK	46 C	0555	0555.6	14	35			
	950	GORK		0555	0602		273			
	950	GORK		0555	0608		220			
	950	GORK	29 PBI	0555	0609	12	2			
	650	GORK	41 F	0555.1	0555.5	22.5	35			
	650	GORK		0555.1	0602.1		187			
	650	GORK		0555.1	0607.9		185			
	650	GORK		0555.1	0612.9		4.2			
	650	GORK		0555.1	0616.8		3.6			
	2000	TYKW	45 C	0555	0602.2	17	98	10		ML/20R
	2000	TYKW			0556.3		28			08R
	2000	TYKW			0608		17			05R
	3750	TYKW	28 PRE	0534	0555	21	4	2		OL
	3750	TYKW	45 C	0555	0556.3	17	78	13		15L
	3750	TYKW			0602.2		48			30L
	3750	TYKW			0608		15			25L
	1030	KIEL	8 S	0555	0602	16	140	80		
	602	KIEL	8 S	0555	0602.5	15	150	60		
	405	KIEL	45 C	0555	0607	28	1000	120		
	240	KIEL		0555	0607	29	820	135		
	1420	KIEL	8 S	0555	0602.5	16	210	100		
	9400	TYKW	45 C	0555	0556.3	15	115	15		28L
	9400	TYKW			0602.1		29			30L
	9400	TYKW			0608		11			25L
	1000	TYKW	45 C	0555	0556.3	5	21	4		OR
	200	GORK	41 F	0558	0559.1	1.8	910			
	200	GORK		0558	0559.6		910			
	1000	TYKW	45 C	0600	0602.4U	7	230 D	30 D		ML
	200	GORK	41 F	0607.3	0607.5	1.1	1550			
	200	GORK		0607.3	0607.9		1550			
	100	GORK	3 S	0607.3	0607.3	0.4	650			
	100	HIRA	45 C	0607.5	0607.6	1	1300	300		WRWL
	1000	TYKW	45 C	0607	0608	2	193	35		05R
	3750	TYKW	20 GRF	0612	0750	108 D	2	1 D		OL
	650	GORK	40 F	0715.9	0721	37	4.4	1.9		
	950	GORK	20 GRF	0717.8	0739.5	35.7	2.7			

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28	113	POTS	40		0742.6	0742.9	0.4	500	20		
	950	GORK	21	GRF	0922.7	1019.9	75.5	4.4	2.4		
	1470	POTS	22		0923	1013.6	151	5.3			
	3000	POTS	20		0924	1019.5	150	7.8U			
	950	GORK	1	S	0926.7	0926.9	0.3	6.8	3.4		
	650	GORK	23	GRF	0928.8	1014.2	64	7.8	3.7		
	950	GORK	4	S/F	0932.8	0934	2.1	87			
	930	BORD	45	C	0932.8	0934.1	2.2	77	20		
	808	ONDR	4	S/F	0932	0933.6	3	25	11.8		
	9500	POTS	20		0935	1229	152	7.8			
	100	GORK	27	RF	0936	1048.5	120 D	450 D			
	234	POTS	45		0938.1	0938.2	0.1	350	20		
	113	POTS	6		0938.2	0938.2	0.1	150	50		
	950	GORK	1	S	0938.7	0938.8	0.2	5.8	2.9		
	408	TRST	45		0940.6	0940.7	0.3	88			
	510	POTS	45		0940.6	0940.7	0.4	28	5		
	536	ONDR	8	S	0940.7	0940.7	0.2	11			
	127	TORN	25	R	0942	1040 U	318 D	400	200		
	408	TRST	27		0948	1024.7	152				
	200	GORK	4	SF	0948.8	0949.4	1.3	450			
	536	ONDR	22	GRF	0948.8	1017.3	42	13	6		
	650	GORK	2	S/F	0949.2	0949.5	0.8	5.6	2.6		
	950	GORK	3	S	0949.5	0949.9	0.8	10.6	5.3		
	930	BORD	3	S	0949	0949.6	1	11	2		
	808	ONDR	2	S/F	0949	0949.4	1	12	7		
	9240	ARCE	20		1002.8	1025.5	109				
	650	GORK	46	C	1016	1017.1	6	9.1			
	650	GORK			1016	1019.3		5.7			
	408	TRST	8		1046.1	1046.3	0.4	53	13		
	950	GORK	20	GRF	1114.8	1120.8	15.20	4			
	7000	SAOP	1		1211.3		2.5	7	3.5		8LOF
	2800	OTTA	21	GRF	1220	1240	35	1.4	0.8		
	410	SGMR	6	S	1232.4	1235.4	5.2	17	3.4		
	2695	SGMR	4	S/F	1232.4	1235.3	13.4	10.5	3.3		
	4995	SGMR	2	S/F	1232.5	1237.1	7.1	6.1	1.8		
	9240	ARCE	20		1232.8U	1235.7U	23				
	8800	SGMR	2	S/F	1232.8	1236.5	5.4	8.8	2.6		
	1415	SGMR	2	S/F	1233.2	1234.8	4.3	3.6	1.1		
	536	ONDR	2	S/F	1233.5	1234.3	5	12	2.3		
	606	SGMR	2	S/F	1233.6	1235.1	3.8	4.4	1.3		
	3000	POTS	2		1233.7	1235	3.8	5.4U	1.8		
	2800	OTTA	4	S/F	1234.2	1235	3.5	10.8	2.6		
	1470	POTS	1		1234.5	1234.9	3	2.9	0.9		
	2800	OTTA	21	GRF	1337	1343	13	1.4	0.7		
	7000	SAOP	28		1339		1.2		3.5		8LOF
	2695	SGMR	1	S	1339.4	1340.7	4.5	7.1	2.1		1.3G
	4995	BOUL	1	S	1339.5	1340	2.5	11	2		
	1415	SGMR	1	S	1340	1340.4	5.8	3.4	1		1.3G
	7000	SAOP	4		1340.2	1340.5	0.9	18.6	9.2		8LOF
	8800	SGMR	1	S	1340.3	1340.7	.9	2.9	.9		
	4995	SGMR	1	S	1340.3	1340.6	8.4	9.6	2.9		
	9240	ARCE	1		1340.5	1340.9	1.5				
	2800	OTTA	1	S	1340	1340.5	2	5.6	1.9		
	9500	POTS	1		1340	1340.5	1.5	5.1			
	1470	POTS	1		1340	1340.5	7	3.6	1.2		
	3000	POTS	3		1340	1340.5	7	7.1	2.5		
	1420	BOUL	1	S	1340	1340.5	1.5	2	1		
	7000	SAOP	29		1341.1		25.8				
	2695	BOUL	8	S	1341	1341.5	1.5	5	2		
	2800	OTTA	24	R	1440	1455	15	1.2	0.6		
	2800	OTTA	27	RF	1440		160	1.2	1.1		
	2800	OTTA	24P	R	1455		125	1.2			
	1415	SGMR	1	S	1608	1608.1	.6	1.2	.4		
	410	SGMR	6	S	1608	1609.2	1.7	9.9	3		
	606	SGMR	4	S/F	1608.1	1608.2	1.6	52.8	15.8		
	2800	OTTA	26	FAL	1700	1720	20	-1.2	-0.6		
	18	MCMA	6	S	1704	1705	1			1	
	2800	OTTA	21	GRF	1725	1750	50	2.2	1.1		
	7000	SAOP	4		1737.2	1738	1.8	26.6	13.3		
	245	SGMR	6	S	1737.2	1737.4	.6	49.6	14.9		
	410	SGMR	8	S	1737.6	1737.7	.2	55.2	16.6		
	4995	SGMR	3	S	1737.6	1738.2	1.3	10.2	3.1		
	1415	SGMR	1	S	1737.9	1738	.9	2.9	.9		
	2695	SGMR	1	S	1738	1738.2	.9	4.3	1.3		
	8800	SGMR	1	S	1738	1738.2	.9	8.3	2.5		
	2800	OTTA	1	S	1738	1738.1	1	2.6	1		
	7000	SAOP	40		1821.1		7				
	410	SGMR	6	S	1834.7	1836.5	3.5	68.1	20.4		
	245	SGMR	6	S	1835.4	1836.6	1.6	123.3	37		
	606	SGMR	3	S	1835.5	1836.5	1.6	23.2	7		
	7000	SAOP	28		1836.7	1914.9	38.2	51.5	25.7		8LOF
	2800	OTTA	23	GRF	1840		380 D	18			
	2695	BOUL	47	GB	1842.5	1937.5	305	2164	413		
	9400	HUAN	28		1843	1916.2	33.2	49.2	9.8		48L
	1420	BOUL	47	GB	1855	1927	222	4036	105		

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28	4995	BOUL	47	GB	1900.5	1935	189.5	2888	901		
	1415	SGMR	28	PRE	1847.3	1914.2	26.9	8.8	4.4		
	1415	SGMR	47	GB	1914.2	1927.3	50.8	8174	2500		
	1415	SGMR	47	GB		1938.4		554			
	1415	SGMR	47	GB		1958		284			
	1415	SGMR	30	PBI	2005	2005	131	10.4	5.2		
	606	SGMR	28	PRE	1901.3	1914.5	13.2	10.3	5.2		
	606	SGMR	47	GB	1914.5	1917	146.8	363	730		
	606	SGMR	47	GB		1939		2448			
	606	SGMR	47	GB		1958.2		331			
	606	SGMR	47	GB		2050.5		791			
	606	SGMR	29	PBI	2141.3	2141.3	34.7	31.8	15.9		
	2695	SGMR	28	PRE	1840.8	1914.6	33.8	21.3	10.7		
	2695	SGMR	47	GB	1914.6	1929	47.4	718	570		
	2695	SGMR	47	GB		1936		1890			
	2695	SGMR	30	PBI	2002	2002	23	14.8	7.4		
	4995	SGMR	28	PRE	1842.6	1914.7	32.1	17.1	8.6		
	4995	SGMR	47	GB	1914.7	1929	45.3	1856	950		
	4995	SGMR	47	GB		1934.6		3155			
	4995	SGMR	29	PBI	2000	2000	30	29.1	14.6		
	7000	SAOP	47		1914.9	1933.9	18.1	2937.8	1338.4		BLOF
	245	SGMR	28	PRE	1904	1914.9	10.9	27.9	14		
	245	SGMR	49	GB	1914.9	1932.4	107.4	587	180 U		
	245	SGMR	49	GB		1951 U		609 D			
	245	SGMR	49	GB		2008		609			
	245	SGMR	49	GB		2052.6		32			
	245	SGMR	29	PBI	2102.3	2102.3	81.7	23.3	11.7		
	2800	OTTA	47	GB	1914	1936	59	1965	470		
	410	SGMR	28	PRE	1909.8	1915	5.2	5.5	2.8		
	410	SGMR	49	GB	1915	1921.4	118.3	351	310		
	410	SGMR	49	GB		1940.2		1024			
	410	SGMR	49	GB		1958.6		765			
	410	SGMR	49	GB		2050.9		784			
	410	SGMR	29	PBI	2113.3	2113.3	62.7	51.5	25.8		
	8800	SGMR	28	PRE	1842.8	1915.4	32.6	23	11.5		
	8800	SGMR	47	GB	1915.4	1927.5	44.6	3236	1100		
	8800	SGMR	47	GB		1934.1		3719			
	8800	SGMR	29	PBI	2000	2000	47	59.8	29.9		
	9400	HUAN	47		1916.2	1934.3	29.5	3108	1206.8		17L
	18	MCMA	41	F	1924	1932	26			3	
	35000	SGMR	47	GB	1927 E	1934.2	48.2D	995	300 U		
	15400	SGMR	47	GB	1927 E	1934.2	31 D	2384	710 U		
	9400	HUAN	29		1945.7	1945.7	96.2	354	69.2		20L
	7000	SAOP	29		1952	1952	47.3U	102.7	57.4U		BLOF
	2800	OTTA	3	S	1954.5	1955	1	50	25		
	2800	OTTA	4	S/F	1957	1957.5	3	58	22		
	1415	SGMR	3	S	2006.6	2008	9.1	135	40.5		
	2695	SGMR	3	S	2006.9	2008.3	3.9	16.8	5		
	2800	OTTA	1	S	2007	2008	2.5	9.6	5		
	2800	OTTA	30	PBI	2014	2014	110	8	4		
	1415	SGMR	41	F	2018	2039.6	44.5	30.6	6.1		
	2800	OTTA	20	GRF	2030	2040	18	3.8	1.9		
	2800	OTTA	45	C	2057.8	2059	7	28	5		
	100	HIRA	45	C	2136	2136.5	1.8	1000	600		SR
	2695	PENT	3	S	2454.5	2455	1.5	10.8	2.7		
29	720	SYDN	8	S	0050.2	0050.4	1.3				
	720	SYDN	45	C	0054.3	0054.7	1.7				
	4995	MANI	2	S/F	0054.3	0055.2	3.2	4.7	1.2		
	606	MANI	4	S/F	0054.3	0054.7	1.7	18.4	4.3		
	1415	MANI	4	S/F	0054.3	0055.2	3.2	10	3.5		
	2695	MANI	2	S/F	0054.3	0055.2	3.2	8.2	1.3		
	2000	TYKW	5	S	0054.5	0054.9	2	10	2		20R
	1000	TYKW	5	S	0054.5	0055	2	7	2		15R
	3750	TYKW	5	S	0054.5	0054.8	1	7	2		
	1400	SYDN	4	S/F	0054.5	0054.8	1				
	720	SYDN	45	C	0109.5	0110	0.8				
	3750	TYKW	20	GRF	0240	0310	80	2	1		OR,116038F
	9400	TYKW	20	GRF	0240	0310	80	5	2		OR
	2000	TYKW	20	GRF	0240	0310	60	1	0.5		OL
	100	HIRA	45	C	0340.8	0341	0.7	950	200		MR
	606	MANI	1	S	0342.5	0343.2	1.1	5.4	1.1		
	9400	TYKW	21	GRF	0410	0425	60	4	2		OL
	3750	TYKW	20	GRF	0410	0430	60	2	1		OL,116038F
	2000	TYKW	20	GRF	0414	0425	45	1.5	0.7		OR
	9400	TYKW	5	S	0443	0444.6	17	8	2		OL
	200	GORK	44	NS	0457 E		480 D		10		
	127	TORN	44	NS	0640 E		500 D				
	260	ONDR	44	NS	0640 E		510 D	61	8		
	240	KIEL	44	NS	0707 E	1101	623	300	40		
	169	DWIN	44	NS	1000 E		280 D		20		
	160	DWIN	44	NS	1000 E		280 D		15		
	259	DWIN	44	NS	1000 E		280 D		10		
	250	DWIN	44	NS	1000 E		280 D		8		
	245	SGMR	44	NS	1035 E	1754.2	747 D	92.5			

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29	410	SGMR	44 NS	1035 E	1754.7	747 D	30.2			
	100	HIRA	44 NS	2030 E	0513	750 D	90	30		SR
	200	HIRA	44 NS	2030 E	0750	750 D	90	30		SL
	100	GORK		0505.1	0510.1		430			
	100	GORK		0505.1	0506.8		450			
	100	GORK	4 SF	0505.1	0505.5	5.8	430			
	100	HIRA	5 S	0506.5	0506.7U	0.5	1300 D	700 D		WRWL
	1000	TYKW	45 C	0522.5	0523.7	4	27	5		35L/02R/35L
	2000	TYKW	45 C	0522.5	0523.7	3	25	7		15R
	9400	TYKW	5 S	0522.5	0523	1.5	84	20		10L
	9400	TYKW	29 PBI	0524		20	7	3		
	1400	SYDN	45 C	0522.7	0523	2				
	720	SYDN	45 C	0522.8	0523.8	2.7				
	2695	MANI	4 S/F	0522.8	0523.3	2	16.4	7.6		
	100	HIRA	45 C	0522.8		1.7	1300 D	1000 D		WRWL
	200	HIRA	45 C	0522.8	0523	3	950	230		WL
	4995	MANI	4 S/F	0522.8	0523.3	1.8	110	34.8		
	3750	TYKW	5 S	0522	0523.1	6	62	8		04L
	1415	MANI	2 S/F	0523	0523.3	2.5	9.7	2.2		
	606	MANI	40 F	0523	0523.2	3.2	174	46.1		III
	2950	GORK	4 SF	0523	0523.5	3.5	56	14		
	650	GORK	46 C	0523.1	0523.4	2.7	108	33		
	650	GORK		0523.1	0524		100			
	650	GORK		0523.1	0524.6		32			
	200	GORK	8 S	0523.2	0523.2U	2.6	150 D			
	100	GORK	6 S	0523.2	0523.2U	1.1	450			
	8800	MANI	4 S/F	0523.2	0523.4	1.2	85	32.5		
	113	POTS	40	0559.8	0600.3	0.8	200	3		
	100	GORK	6 S	0600.2	0600.3	0.4	450			
	9400	TYKW	21 GRF	0613	0620	50	6	3		0L
	9100	GORK	1 S	0634.8	0635.3	2.5	11	5.5		
	9400	TYKW	5 S	0634	0634.8	3	10	3		0L
	650	GORK	22 GRF	0717.6	0722.6	12.2	3.7	1.6		
	113	POTS	6	0720.6	0720.7	0.2	700	200		
	100	GORK	6 S	0721	0721	3.5	450			
	950	GORK	20 GRF	0721.8	0726	10.5	2.6	1.3		
	9240	ARCE	3	0750.8	0751.6	2.4				
	9500	POTS	3	0750	0751.1	5	27	6.4		
	9100	GORK	41 F	0751	0752	15.8	31			
	9100	GORK		0751	0806		6.3			
	4995	MANI	1 S	0751.2	0751.8	1.2	4.6	2.3		
	8800	MANI	3 S/F	0751.2	0751.8	2.3	32.5	10.2		
	9240	ARCE	29	0753.2		5.6				
	9240	ARCE	21	0802.2	0828.1	145				
	200	GORK	8 S	0833.8	0835.1	2.8	200			
	9500	POTS	3	0908.5	0909.1	12	52	15		
	1470	POTS	3	0908.5	0909.3	7.5	17	7.1		
	3000	POTS	3	0908.5	0909.2	9.2	31 U	14 U		
	1415	MANI	3 S	0908.8	0909.5	2.9	14	4.9		
	4995	MANI	3 S	0908.8	0909.4	2.5	38.3	11.6		
	2695	MANI	4 S/F	0908.8	0909.4	2.5	32.1	12.6		
	8800	MANI	3 S	0908.8	0909.5	2.5	46.7	16.2		
	950	GORK	4 SF	0909.2	0910 U	2.4	75			
	2950	GORK	3 S	0909.3	0910	16.5	68	23		
	2950	GORK	29	0909.3	0910	7.1	9.2	3.9		
	9100	GORK	3 S	0909.5	0909.8	3	63	30		
	9240	ARCE	3	0909	0909.5	3.3				
	930	BORD	45 C	0909	0910	2	106	6		
	9240	ARCE	29	0912.3		10.6				
	9240	ARCE	1	1024.3	1024.5	0.8				
	1470	POTS	4	1040.5	1044.2	15	14	4.4		
	3000	POTS	4	1040.5	1042.2	25	11 U			
	950	GORK	22 GRF	1040.9	1043.1	7.5	10	3.5		
	259	OWIN	45 C	1040	1047	10	160	10		
	250	OWIN	45 C	1040	1047	10	200	10		
	9100	GORK	21 GRF	1041.2	1047.3	11.1	7.7	3.5		
	408	TRST	42	1041.8	1042.9	2.1	19			
	536	ONDR	45 C	1041.8	1042.3	4.5	10	2.8		
	2950	GORK	21 GRF	1042	1044.1	11.8	13.8	7		
	9500	POTS	3	1042	1042.7	9 U	16			
	9100	GORK	2 S/F	1042.5	1043.5	28	21			
	650	GORK	4 SF	1042.6	1043.5	1.9	11.3	2.8		
	9240	ARCE	40	1042	1043	10.5				
	930	BORD	40 F	1042	1042.8	4	13	2		
	2950	GORK	1 S	1043	1043.4	0.6	6.2	3.3		
	100	GORK	6 S	1043.2	1043.2	0.3	700			
	127	TORN	47 GB	1045	1048	4.5	2450	400		
	127	TORN		1045	1046.5	1	1300			
	113	POTS	45	1045.1	1047.8	3.1	2000	300		
	100	GORK	45 C	1045.3	1046.5	3	700			
	100	GORK		1045.3	1048		700			
	169	OWIN	45 C	1045	1047	5	150 D	30		
	160	OWIN	45 C	1045	1047	5	150 D	40		
	234	POTS	45	1046.1	1046.6	0.7	100	5		
	200	GORK	4 SF	1046.3	1047.9	3.9	1800			

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29	113	POTS	45		1100.4	1100.5	0.2	150	15		
	930	BORD	46	C	1100.5	1100.9	0.5	35	2		
	950	GORK	4	SF	1100.8	1101.3	0.6	18	5		
	606	SGMR	2	S/F	1149	1150.1	1.8	3	.9		
	100	GORK	4	SF	1149.4	1150.4	4	700			
	100	GORK			1149.4	1151.7		300			
	1415	SGMR	2	S/F	1149.7	1150.1	.7	3.4	1		
	113	POTS	40		1149.8	1150	1	200	5		
	7000	SAOP	40		1203.8						
	7000	SAOP	25		1203.8		489.2U	17			
	113	POTS	6		1227.7	1227.7	0.1	350	120		
	113	POTS	45		1318.5	1318.5	0.1	150	25		
	15400	SGMR	20	GRF	1330.7	1334	18.4	10.1	6		
	18	MCMA	6	S	1453	1455	2			1	
	1415	SGMR	2	S/F	1538	1540.2	5.4	2.8	.8		
	2695	SGMR	20	GRF	1538.8	1539.7	11	1.5	.9		
	2800	OTTA	20	GRF	1538	1540	14	1.2	0.5		
	18	MCMA	41	F	1618	1625	9			2	
	245	SGMR	6	S	1714.7	1733.2	26.4	127.6	38.3		
	606	SGMR	22	GRF	1717.8	1733.8	25	28.2	16.9		
	410	SGMR	6	S	1718.4	1731.9	24.7	53.8	16.1		
	1415	SGMR	22	GRF	1727.9	1728.6	13.1	1.2	.7		
	18	MCMA	42	SER	1734	1804	43			3	
	2695	SGMR	22	GRF	1749.8	1755.9	11	4.4	2.7		
	1415	SGMR	22	GRF	1751.4	1801	12.9	5.5	3.3		
	2800	OTTA	1	S	1751.5	1752.2	1.5	1.6	0.6		
	2800	OTTA	26	FAL	1801	1803	2	-1.2	-0.6		
	2800	OTTA	32	ABS	1810	1825	90	-0.8	-0.4		
	15400	SGMR	4	S/F	2015.7	2016	8.1	23.4	7		
	15400	SGMR	4	S/F	2039.8	2040.1	2.6	17.2	5.1		
	4995	BOUL	3	S	2054.5	2055.5	3.5	13	4		
	2800	OTTA	1	S	2055.5	2056	5	1.6	0.6		
	2695	BOUL	3	S	2056	2056.5	2	3	1		
	500	HIRA	24	R	2100	2151	90	14	3		
	15400	SGMR	4	S/F	2132.3	2132.5	.5	29.1	8.7		
	9400	TYKW	5	S	2337	2339.5	6	48	10		20L
	8800	MANI	4	S/F	2338.8	2339.7	3.7	31.3	4.8		
	4995	MANI	1	S	2339	2339.7	3	8.6	1.4		
30	500	HIRA	27	RF	0010	0023	36	12	4		
	100	HIRA	45	C	0118.7	0118.9	0.5	800	300		WR
	500	HIRA	24	R	0305	0412	340 D	25	6		
	9400	TYKW	21	GRF	0345	0450	120	8	4		OL
	2000	TYKW	45	C	0347.5	0349.7	3.5	8	2.5		OR
	2000	TYKW	30	PBI	0351		29	1.5	1		
	606	MANI	41	F	0347.5	0359.2	27.5	90	11.2		
	3750	TYKW	45	C	0347	0349.7	3	7	2		OL,116019F
	3750	TYKW	30	PBI	0350		40	2	1		
	1415	MANI	41	F	0348	0359.2	15	38.9	5.9		
	4995	MANI	22	GRF	0348	0359.6	20.5	11.1	3.3		
	2695	MANI	41	F	0348	0349.8	12.8	8.3	1.3		
	720	SYDN	4	S/F	0348	0349.2	3.2				
	1400	SYDN	4	S/F	0348	0349.3	2.5				
	8800	MANI	22	GRF	0348	0359.2	15	10.6	2.7		
	1000	TYKW	45	C	0348	0349.4	4	20	3		45L
	9400	TYKW	5	S	0348	0349.6	4	8	2		20L
	720	SYDN	45	C	0357.5	0359.1	2.7				
	9400	TYKW	5	S	0357	0359	6	7	3		OL
	500	HIRA	45	C	0358	0359.1	2.5	30	15		
	1400	SYDN	4	S/F	0358.2	0359.1	2.2				
	1000	TYKW	45	C	0358	0358.9	3	52	10		02R
	2000	TYKW	45	C	0358	0359.1	4	23	2		OR
	3750	TYKW	5	S	0358	0359.4	7	2	1		OL,116019F
	100	HIRA	45	C	0359	0359.3	0.5	880	300		WRWL
	1000	TYKW	45	C	0401	0408.4	18	3	1		SL
	3750	TYKW	5	S	0450	0500	30	2	1		OL
	200	GORK	44	NS	0500 E		237 D		15		
	100	GORK	44	NS	0502 E		478 D		25		
	127	TORN	44	NS	0640 E		500 D				
	405	KIEL	44	NS	0714 E	0936	469	110	55		
	240	KIEL	44	NS	0714 E	1313	469	205	75		
	536	ONDR	44	NS	0725 E		460 D	45	8		
	260	ONDR	44	NS	0725 E		460 D	98	11		
	169	DWIN	44	NS	1005 E		265 D		35		
	160	DWIN	44	NS	1005 E		265 D		35		
	259	DWIN	44	NS	1005 E		265 D		35		
	250	DWIN	44	NS	1005 E		265 D		35		
	606	SGMR	44	NS	1033 E	1254.7	750 D	20.4			
	245	SGMR	44	NS	1033 E	1822.5	750 D	161.2			
	410	SGMR	44	NS	1033 E	1256.4	750 D	37.8			
	200	GORK	44	NS	1136 E		84 D		15		
	200	HIRA	44	NS	2030 E	2210	750 D	65	25		SL
	100	HIRA	44	NS	2030 E	2349	750 D	110	20		SR
	650	GORK	23	GRF	0502	0505.3	28.8	6.3	3		
	2950	GORK	21	GRF	0503 E	0534.4	43	15.5	7		

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MAR 1976	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
30	2000	TYKW	5 S	0525	0528.5	5	11	3		25L
	2000	TYKW	29 PBI	0530		55	1.7	0.8		
	720	SYDN	45 C	0526.1	0529.5	4.5				
	2695	MANI	2 S/F	0526.9	0528.6	3.5	10.2	5.1		
	1400	SYDN	45 C	0527.2	0528.6	2.5				
	606	MANI	40 F	0527.3	0528	3.1	32.5	2.2		
	1415	MANI	4 S/F	0527.3	0528.6	2.4	18.9	5.4		
	4995	MANI	4 S/F	0527.6	0528.6	2.8	15.5	5.6		
	3750	TYKW	5 S	0527	0528.6	3	16	5		0L
	3750	TYKW	29 PBI	0530		30	4	2		
	9400	TYKW	5 S	0527	0529	15	6	2		0L
	1000	TYKW	45 C	0527	0528.7	3	13	3		95L
	650	GORK	2 SF	0528	0530	2.8	5.3	1.3		
	2950	GORK	3 S	0528.1	0529.1	2.7	25	8.2		
	950	GORK	20 GRF	0605 E	0606.5	112.5	6	3		
	650	GORK	22 GRF	0609 E	0628.5	50	6.8	3		
	650	GORK	22 GRF	0704 E	0743.6	66	11	4.6		
	606	MANI	8 S	0716.5	0716.8	.5	68	28		
	650	GORK	22 GRF	0830.6	0924	88	13.8	7		
	950	GORK	20 GRF	0853.6	0932.3	97	5.7	2.2		
	228	HARS	27 RF	0900 U	0925 .	60 U	75	35		
	536	ONDR	8 S	1020.6	1020.6	0.2	52			
	950	GORK	22 GRF	1200.1	1237.5	60 D	8.4	4.2		
	9240	ARCE	22	1202	1213.2	34				
	9240	ARCE	21	1247.9	1251.3	25				
	9500	POTS	3	1249.5	1250.2	1.5	11			
	9240	ARCE	2	1249.8	1250.2	1.2				
	9500	POTS	1	1322.5	1323	1	9.8			
	9240	ARCE	1	1322.7	1323.1	1.4				
	15400	SGMR	3 S	1323.6	1324.1	1	31.4	9.4		1
	18	MCMA	6 S	1342	1344	2			1	
	2800	OTTA	20 GRF	1540	1630	95	1.2	0.6		
	18	MCMA	6 S	1733	1735	3			1	
	18	MCMA	42 SER	1816	1823	26			2	
	8800	SGMR	22 GRF	1901	1901.7	15.1	20.2	12.1		
	7030	SAOP	4	1901.1	1901.6	13	18.5	9.2		BLOD
	2695	SGMR	22 GRF	1901.3	1903.2	21.2	1.7	1		
	15400	SGMR	1 S	1901.4	1901.9	.9	7.6	2.3		
	4995	SGMR	22 GRF	1901.4	1901.8	14.9	9.3	5.6		
	500	HIRA	24 R	2027 E	0505	740 D	25	5		
	18	MCMA	6 S	2045	2047	2			1	
	2800	OTTA	20 GRF	2100	2105	30	1.6	0.8		
	245	SGMR	6 S	2103	2105.9	3.8	40.8	8.2		
	410	SGMR	6 S	2105.5	2105.7	.7	8.4	1.7		
	18	MCMA	6 S	2105	2108	4			2	
	1415	SGMR	1 S	2139.5	2141.9	3	.4	.1		1
	245	SGMR	6 S	2140	2140.8	1.8	17.7	3.5		1
	410	SGMR	6 S	2140	2140.9	1.3	5	1		1
	606	SGMR	1 S	2140.5	2142.1	2	3	.9		1
	18	MCMA	41 F	2145	2212	34			1	
	1000	TYKW	5 S	2305	2305.1	0.3	1.2	0.3		OR
	2000	TYKW	5 S	2309.6	2309.7	0.3	0.6	0.2		OR
	2000	TYKW	5 S	2312.6	2312.7	0.3	2.6	0.8		OR
	1000	TYKW	5 S	2312.6	2312.7	0.4	4	1		OR
	1000	TYKW	5 S	2324.5	2324.6	0.3	0.6	0.2		OR
	18	MCMA	6 S	2330	2331	2			1	
31	1400	SYDN	2 S/F	0104.2	0104.7	1				
	500	HIRA	45 C	0104.2	0104.8	1	20	8		
	720	SYDN	2 S/F	0104.7	0104.8	0.3				
	1000	TYKW	5 S	0104	0104.8	2	7	1		OR
	3750	TYKW	5 S	0104	0104.6	1	14	3		0L,296001F
	2695	PENT	2 S/F	0104	0104.8	1	8.2	4.1		
	2000	TYKW	5 S	0104	0104.6	2	4	1		20L
	606	MANI	40 F	0154.2	0200.1	6.5	200	9.9		
	720	SYDN	45 C	0154.7	0159.9	5.7				
	1000	TYKW	45 C	0154.8	0155.2	1	3	1		20L
	1400	SYDN	45 C	0155	0158.6	6.3				
	1000	TYKW	5 S	0156	0156.1	0.3	32	10		08L
	100	HIRA	45 C	0157.4	0158.4	2.5U	900	150		WR
	8800	MANI	4 S/F	0157.7E	0159.7U	2.9D	15.4U	5.1D		
	2695	MANI	4 S/F	0157.7E	0158.8U	2.3D	8.2U	2.5D		
	4995	MANI	4 S/F	0157.7E	0159.2U	2.9D	12.2U	5.6D		
	1415	MANI	4 S/F	0157.7E	0158.5U	2.8D	20.9U	4.6D		
	1000	TYKW	45 C	0157	0158.7	3.5	44	6		COMPLEX POL
	3750	TYKW	45 C	0157	0158.7	10	4	1		20L,296001F
	9400	TYKW	5 S	0158	0159.7	10	11	3		20L
	500	HIRA	45 C	0159	0159.5	1.5	80	15		
	8800	MANI	3 S	0304.4	0305.4	2.4	34.1	15.7		
	4995	MANI	3 S	0304.5	0305.2	1.9	12.4	6.2		
	3750	TYKW	5 S	0304	0305.2	2	4	1		0L
	3750	TYKW	29 PBI	0306		12	2	1		
	9400	TYKW	5 S	0304	0305.2	3	37	10		25L
	9400	TYKW	29 PBI	0307		15	6	2		
	606	MANI	4 S/F	0420.7	0421.4	1.6	13.8	3.3		

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31	1415	MANI	2 S/F	0421	0421.6	1.6	5.4	2.2		
	2695	MANI	40 F	0421.3	0421.8	1.1	36.4	5.9		
	2000	TYKW	45 C	0421	0421.6	2	23	6		OR
	3750	TYKW	45 C	0421	0421.7	1	56	10		OL,296001F
	1000	TYKW	5 S	0421	0421.6	2	6	2		OR
	9400	TYKW	5 S	0421	0421.6	2	5	2		OL
	4995	MANI	4 S/F	0453.3	0455.6	6.8	45.3	20.E		
	8800	MANI	4 S/F	0453.3	0455.6	6.9	230	91		
	2695	MANI	4 S/F	0453.3	0455.5	4.2	14.3	5.2		
	9400	TYKW	45 C	0453.5	0455.6	4.5	200	75		20L
	9400	TYKW	30 PBI	0458		70	22	7		
	3750	TYKW	45 C	0453	0455.6	5	23	8		08R
	3750	TYKW	30 PBI	0458		70	5	2		
	606	MANI	40 F	0454	0455.6	2.6	7.2	2.8		
	1415	MANI	4 S/F	0454	0456.3	3.5	11.3	4.3		
	1000	TYKW	45 C	0454.5	0456.2	2.5	8	1.5		50L
	2000	TYKW	45 C	0454	0455.6	3	20	4		40L
	2000	TYKW	29 PBI	0457		45	1.4	0.7		
	720	SYDN	45 C	0459.6	0504.7	32.5				
	1000	TYKW	45 C	0459	0504.6	9	7	2		70L
	606	MANI	4 S/F	0500.5	0504.5	6.8	17.1	9.9		
	1000	TYKW	45 C	0508	0525.2	25	5	2.5		SL
	3750	TYKW	5 S	0522	0525	20	2	1		OL
	9400	TYKW	5 S	0522	0525	20	3	1		OL
	200	HIRA	45 C	0625	0625.4	1	150	50		WL
	100	HIRA	45 C	0625.2	0625.5	0.8	120	40		WR
	808	ONDR	44 NS	0700 E		490 D	70	18		
	536	ONDR	44 NS	0700 E		490 D	56	18		
	260	ONDR	44 NS	0700 E		490 D	168	30		
	405	KIEL	44 NS	0703 E	0832	627	180	60		MR
	240	KIEL	44 NS	0703 E	1028	627	110	40		
	127	TORN	44 NS	0730 E		450 D				
	169	DWIN	44 NS	0855 E		325 D	150 D	5		
	160	DWIN	44 NS	0855 E		325 D	150 D	5		
	259	DWIN	44 NS	0855 E		325 D	300	20		
	250	DWIN	44 NS	0855 E		325 D	300	20		
	410	SGMR	44 NS	1031 E	1538.2	753 D	98.4			
	606	SGMR	44 NS	1031 E	1445.8	753 D	28.1			
	245	SGMR	44 NS	1031 E	2041.5	753 D	245.3			
	100	HIRA	44 NS	2030 E	2348	750 D	80	10		SR
	200	HIRA	44 NS	2030 E	0552	750 D	60	10		SL
	1470	POTS	4	0701.5	0704.2	5.5	31	8.6		
	2000	TYKW	5 S	0701	0701.7	1	3.2	0.8		OL
	9100	GORK	1 S	0702.1	0704	9.1	14.7	3		
	3000	POTS	4	0702.5	0703.6	2.5	47 U	13 U		
	9500	POTS	3	0702.5	0704	15	12	2.7		
	1415	MANI	4 S/F	0702.7	0704	2.6	28.1	7		
	606	MANI	4 S/F	0703.3	0704	2	19.8	5.5		
	4995	MANI	1 S	0703.5	0704	1	9.3	3.1		
	8800	MANI	1 S	0703.5	0704	1	7.8	2.6		
	2695	MANI	4 S/F	0703.5	0703.9	1	51	10.4		
	1000	TYKW	5 S	0703	0704	2	54	7		01L
	2000	TYKW	45 C	0703	0703.8	2	21	5		OL
	930	BORD	46 C	0703	0704	2	151	6		
	3750	TYKW	5 S	0703	0704	1.5	47	8		OR
	3750	TYKW	29 PBI	0704.5		20	2	1		
	9400	TYKW	5 S	0703	0704	2	13	3		15L
	9400	TYKW	29 PBI	0705		7	2	1		
	510	POTS	45	0705.3	0706.1	2	10	3		
	800	KIEL	27 RF	0858	1016	68	25	15		SR,MR
	602	KIEL	27 RF	0858	1012	348	20	10		SR,MR
	1030	KIEL	27 RF	0915		95	10 E	10 E		SR,MR
	930	BORD	40 F	0933	1021.8	84	19	4		
	510	POTS	45	1050.9	1051.4	7	18	3		
	113	POTS	41	1052	1052.1	2.7	550	10		
	1470	POTS	21	1132	1221.5	238 D	5.4			
	3000	POTS	21	1133	1241	237 D	11 U			
	9240	ARCE	25	1139.1						
	410	SGMR	7 C	1140	1155.3	30.7	477.7	143.3		
	9500	POTS	22	1140	1235.8	227	18			
	408	TRST	45	1141	1141.3	0.4	190 D	57		
	405	KIEL	46 C	1141	1304	183	1050	120		MR
	245	SGMR	7 C	1149	1314.5	117.7	316.3	94.9		
	113	POTS	45	1149	1301	221 D	700			
	234	POTS	45	1149	1301	221 D	150			
	602	KIEL	45 C	1150	1158	22	960	440		MR
	240	KIEL	46 C	1150	1315	186	1900	280		MR
	2800	OTTA	21 GRF	1150	1230	330	7.6	3.8		
	510	POTS	45	1151.5	1156.8	20	550	100		
	800	KIEL	45 C	1151	1158	19	140	80		MR
	1415	SGMR	46 C	1152	1155.1	52	53.9	16.2		
	1415	SGMR	46 C		1157.4		40.6			
	1470	POTS	46	1152	1155.6	16	48			
	606	SGMR	47 GB	1152	1156.2	18	116E	367.8		
	606	SGMR	47 GB		1158		1225.9			

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MAR 1976	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
31	4995	SGMR	4 S/F	1152.2	1157.4	16.4	14.5	4.5		
	9240	ARCE	22	1152.3	1224.1	83				
	1030	KIEL	45 C	1152	1158	18	120	90		MR
	1420	KIEL	45 C	1152	1201	13	90	40		MR
	930	BORD	45 C	1152	1158	35	172	25		
	808	ONDR	49 GB	1153.2	1155	17	143	83		
	3000	POTS	46	1153.5	1157.3	9.5	22 U			
	408	TRST	47	1153.6	1155.3	46 D	280 D			
	2695	SGMR	46 C	1153.6	1158.3	14.7	25.9	8.2		
	2695	SGMR	46 C		1200.8		27.4			
	7000	SAOP	23	1153.7	1157.4	81.4	23.6	15		BLOF
	127	TORN	27 RF	1153 U	1235	140	670	350		
	536	ONDR	49 GB	1153	1156.3	17	358	202		
	9100	GORK	21 GRF	1154	1235	75 D	20			
	7000	SAOP	1	1154.9	1155.5	1.2	8.3	4.1		BLOF
	2800	OTTA	45 C	1154	1157.5	10	20.2	6.8		
	169	DWIN	24 R	1155		30		150		
	160	DWIN	24 R	1155		30		150		
	259	DWIN	24 R	1155		30		140		
	250	DWIN	24 R	1155		30		130		
	7000	SAOP	2	1156.4	1157.4	1.7	14.2	6.9		BLOF
	9100	GORK	45 C	1156.5	1157.5	5	6.8	2		
	9100	GORK		1156.5	1200		4.3			
	7000	SAOP	1	1159.2	1200	1.9	6.6	3.3		BLOF
	234	POTS	45	1223	1224.3	1.8	520	10		
	1470	POTS	46	1233.5	1238.7	6.5	14			
	930	BORD	45 C	1234	1238.2	11	84	15		
	3000	POTS	3	1236.5	1238.8	3.5	13 U			
	2800	OTTA	1 S	1236.5	1239	9	4.6	1.6		
	1415	SGMR	46 C	1259.5	1302.9	25.3	117.6	41.2		
	1415	SGMR	46 C		1304		205.8			
	410	SGMR	49 GB	1259.7	1304	12.3	758.5	151.7		
	2695	SGMR	4 S/F	1259.8	1304.3	33.7	29.3	8.8		
	2800	OTTA	40 F	1259.9	1310	11	25			
	606	SGMR	4 S/F	1300	1301.2	7.9	14.6	4.4		
	1470	POTS	42	1300	1302.6	14	97			
	930	BORD	40 F	1300	1304.3	11	14	2		
	8800	SGMR	22 GRF	1301.1	1304.1	18.2	9.4	2.8		
	4995	SGMR	22 GRF	1302	1304	12.5	5.9	1.8		
	3000	POTS	42	1303.5	1304	7.5	24			
	234	POTS	41	1309.6	1314.4	7.8	900	25		
	2800	OTTA	1 S	1323	1324.1	3	3	1		
	930	BORD	46 C	1324	1324	1	60	2		
	7000	SAOP	2	1330.8	1330.9	1.3	11.7	5.8		BLOF
	536	ONDR	49 GB	1340	1416.5	56	150	122		
	606	SGMR	46 C	1343	1352.5	52.5	13.2	41.2		
	606	SGMR	46 C		1357.7		205.9			
	510	POTS	45	1348	1417.6	57	245	40		
	410	SGMR	49 GB	1349	1418.3	46.8	672	201.7		
	228	MARS	48 C	1350.2	1351.4	1.9	650	90		
	2800	OTTA	1 S	1356	1356.5	1	1.8	0.9		
	1420	BOUL	8 S	1435	1436	2	12	3		
	113	POTS	41	1436.1	1446.4	12	850	9		
	15400	SGMR	1 S	1436.2	1436.8	2	8	2.4		
	2800	OTTA	45 C	1436.2	1437.9	2.8	3.2	0.8		
	2695	SGMR	2 S/F	1436.3	1437.8	2	6.1	1.8		
	1415	SGMR	4 S/F	1436.3	1436.5	1.8	32.2	9.7		
	9240	ARCE	3	1436.4	1436.9	2.4				
	9240	ARCE	21	1436.4	1446.8	25.5				
	8800	SGMR	1 S	1436.5	1437.3	2.2	9.9	3		
	606	SGMR	4 S/F	1436.5	1437.3	1.9	14.6	4.4		
	4995	SGMR	1 S	1436.6	1437.8	1.9	3.3	1		
	410	SGMR	6 S	1436.8	1437	1.7	75.9	22.8		
	3000	POTS	42	1436	1446.3	19	11 U			
	1470	POTS	42	1436	1436.6	12	22			
	930	BORD	46 C	1436	1436.8	2	18	3		
	2800	OTTA	40 F	1445.1		2	3.4			
	2800	OTTA	1A S	1445	1448.7	10	2	1		
	930	BORD	41 F	1445	1445.3	4	18	2		
	18	MCMA	6 S	1446	1448	3			1	
	1415	SGMR	1 S	1608.3	1609.6	3.4	2.2	.7		
	2800	OTTA	1 S	1613.9	1614.2	3	1	0.5		
	930	BORD	46 C	1614	1614.1	1	86	2		
	2800	OTTA	1 S	1627.1	1627.5	1	1.4	0.7		
	2695	SGMR	4 S/F	1757.7	1758.7	8	34.9	10.5		
	4995	SGMR	1 S	1757.8	1758.8	1.7	5.3	1.6		
	2800	OTTA	2 S/F	1758	1758.5	2	1.6	0.8		
	2695	SGMR	1 S	1806.5	1807.8	4.1	4.8	1.4		
	4995	SGMR	1 S	1806.9	1808.6	6.8	.6	.2		
	18	MCMA	41 F	1806	1812	44			3	
	2800	OTTA	2 S/F	1806	1807.7	6	2.8	0.7		
	1415	SGMR	1 S	1807.2	1807.6	4.4	1.4	.4		
	8800	SGMR	1 S	1807.5	1810	4.2	3.3	1		
	15400	SGMR	1 S	1810.1	1810.6	1	2.2	.7		
	1415	SGMR	22 GRF	1818.3	1836.6	63.6	4.6	2.9		

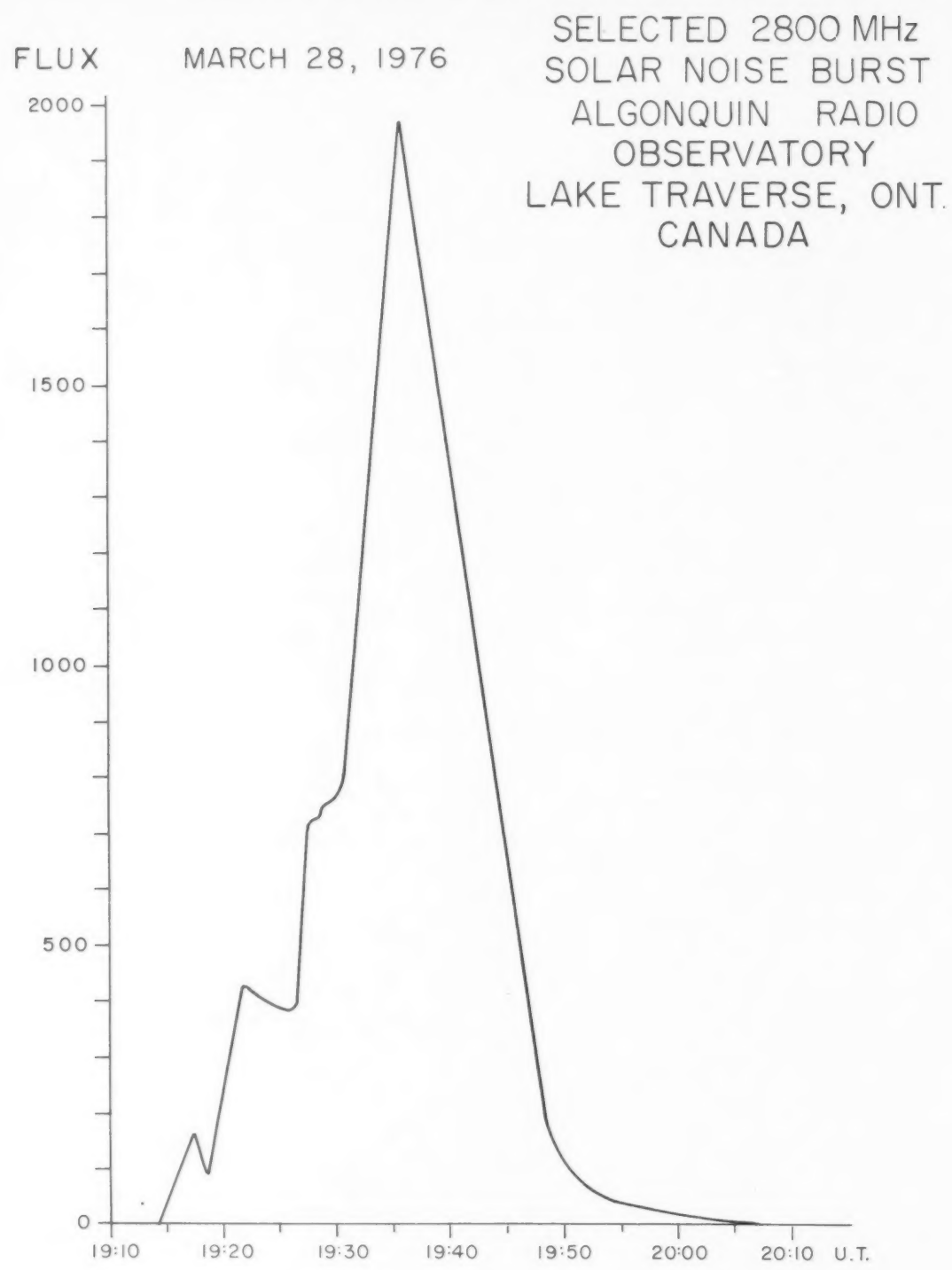
SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES
MARCH 1976

MAR 1976	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
31	606	SGMR	22 GRF	1823.4	1834.9	40.8	17.9	10.7		
	2695	SGMR	20 GRF	1828.7	1835	34.7	4.2	2.5		
	2800	OTTA	20 GRF	1829	1835	35	3.2	1.6		
	8800	SGMR	20 GRF	1831.6	1835.3	33.4	5.2	3.1		
	4995	SGMR	20 GRF	1831.6	1836	41.5	3.1	1.9		
	15400	SGMR	20 GRF	1831.7	1845.2	20.6	6.7	4		
	18	MCMA	42 SER	1915	1919	31			1	
	15400	SGMR	3 S	1959.1	1959.3	1.8	12.3	3.7		
	8800	SGMR	1 S	1959.3	1959.4	1.3	9.4	2.8		
	2800	OTTA	20 GRF	2005	2020	35	1.2	0.8		
	245	SGMR	49 C	2127.3	2127.5	2.2	620.4	62		
	410	SGMR	6 S	2127.4	2127.6	2.1	27.7	5.5		
	200	HIRA		2127.4	2127.6		500			WL
	200	HIRA	45 C	2127.4		1.5		200		
	200	HIRA		2127.4	2128.2		700			WL
	15400	SGMR	3 S	2127.4	2127.7	5.8	16.8	5		
	2800	OTTA	2 S/F	2127.5			4			
	100	HIRA	45 C	2127.5		1.5		250		
	100	HIRA		2127.5	2128.4		970 D			SR
	100	HIRA		2127.5	2127.7		970 O			SR
	606	SGMR	1 S	2127.5	2127.7	2	2.8	.8		
	2695	PENT	2 S/F	2127.5	2128.2	1	8.4	2		
	2800	OTTA	21 GRF	2127	2141	50	1	0.5		
	1415	SGMR	22 GRF	2128.1	2128.3	22.6	18.4	11		
	500	HIRA	45 C	2133.4	2134.2	1	12	4		
	18	MCMA	42 SER	2145	2213	34			1	

Reports received from the following observatories:

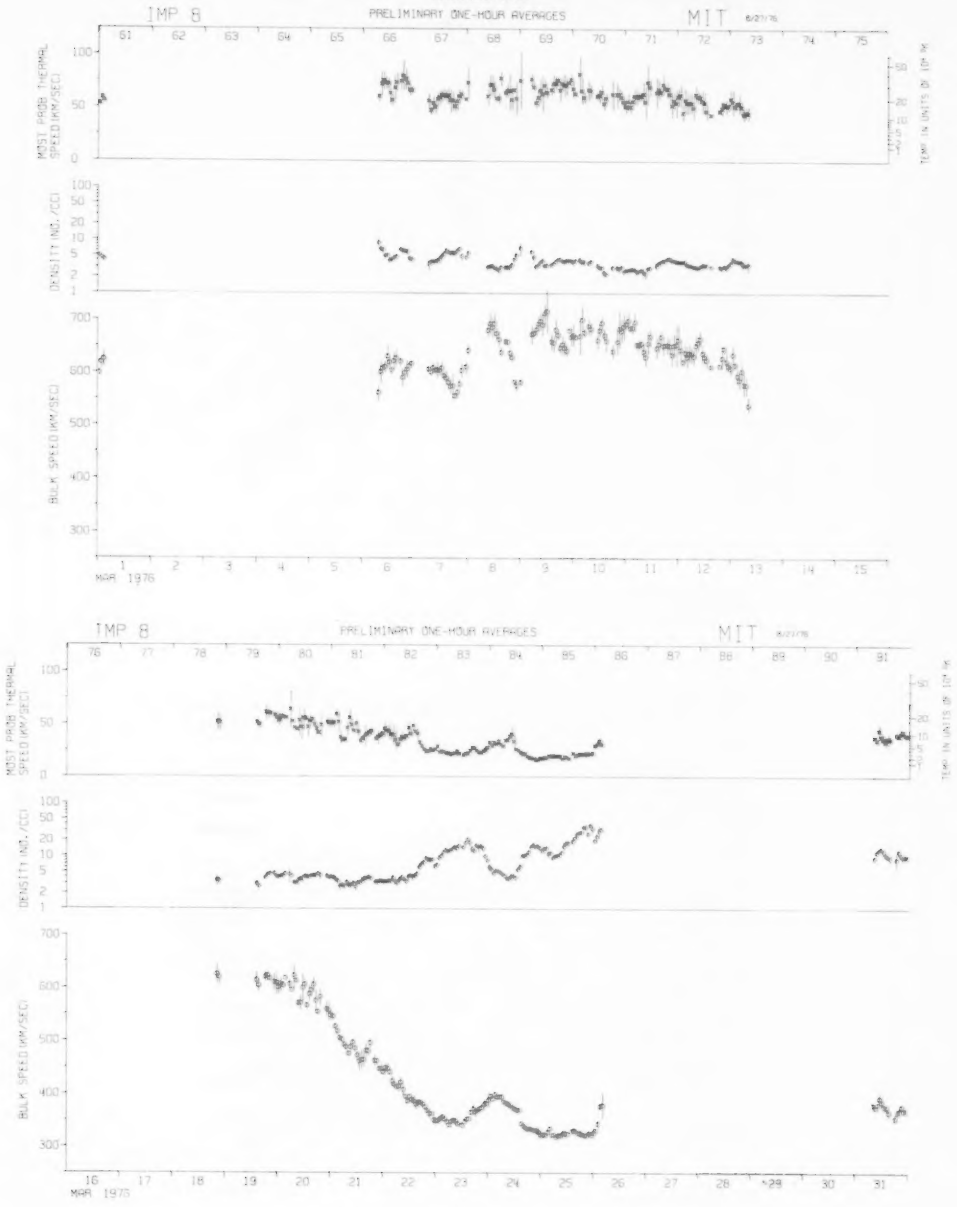
ARCE = Arcetri
BERL = Berlin-Adlershof
BORD = Bordeaux
BOUL = Boulder
DWIN = Dwingeloo
GORK = Gorky
HIRA = Hiraiso
HUAN = Huancayo
MANI = Manila
MCMA = McMath-Hulbert
ONDR = Ondrejov
OTTA = Ottawa
PENT = Penticton
POTS = Potsdam
SAOP = Sao Paulo
SGMR = Sagamore Hill
SYDN = Sydney
TORN = Torun
TYKW = Toyokawa
TRST = Trieste

SELECTED SOLAR NOISE BURST



IMP 7 AND 8 SOLAR WIND PLASMA

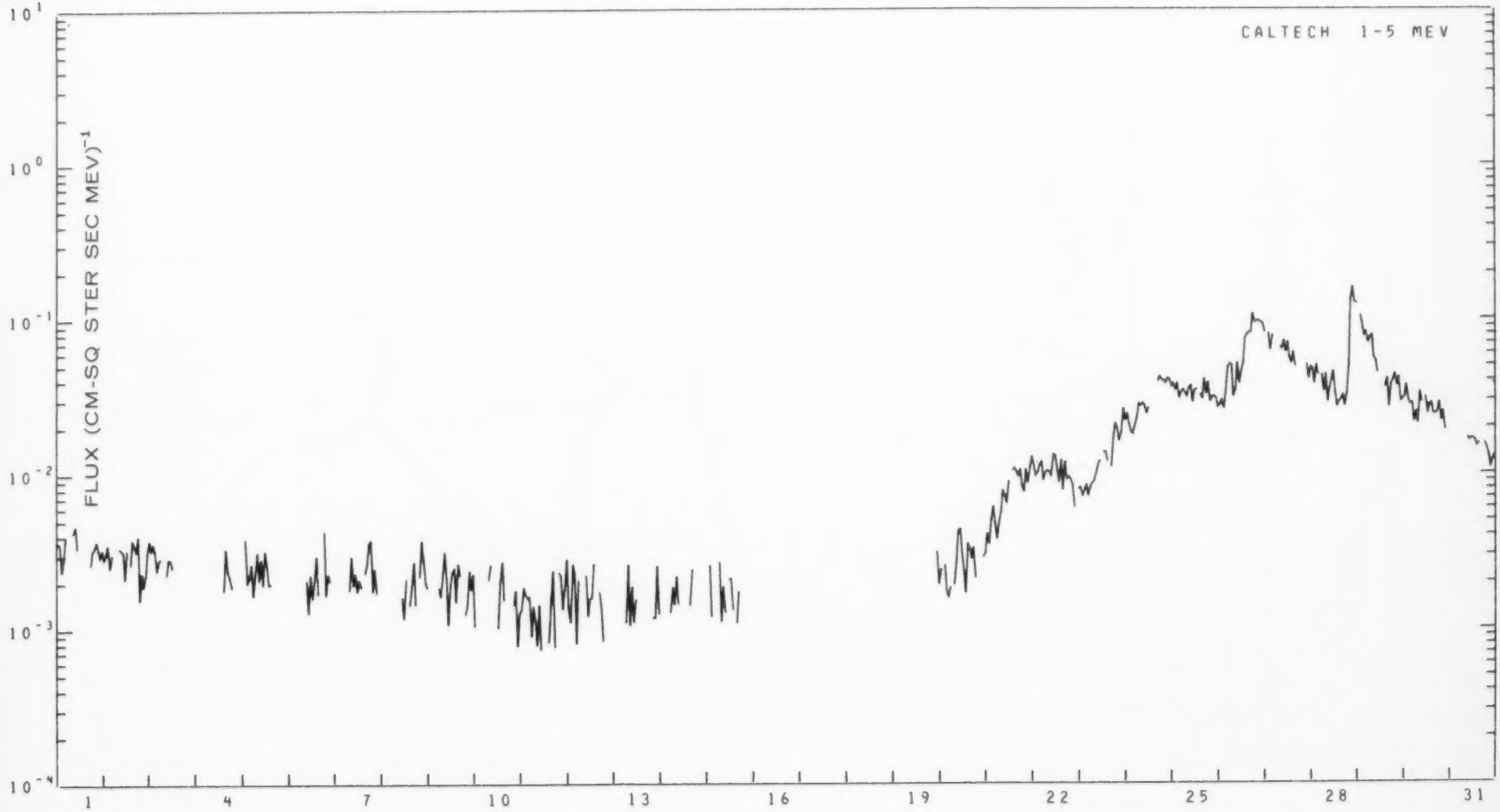
MARCH 1976



IMP 7 AND 8 ELECTRONS

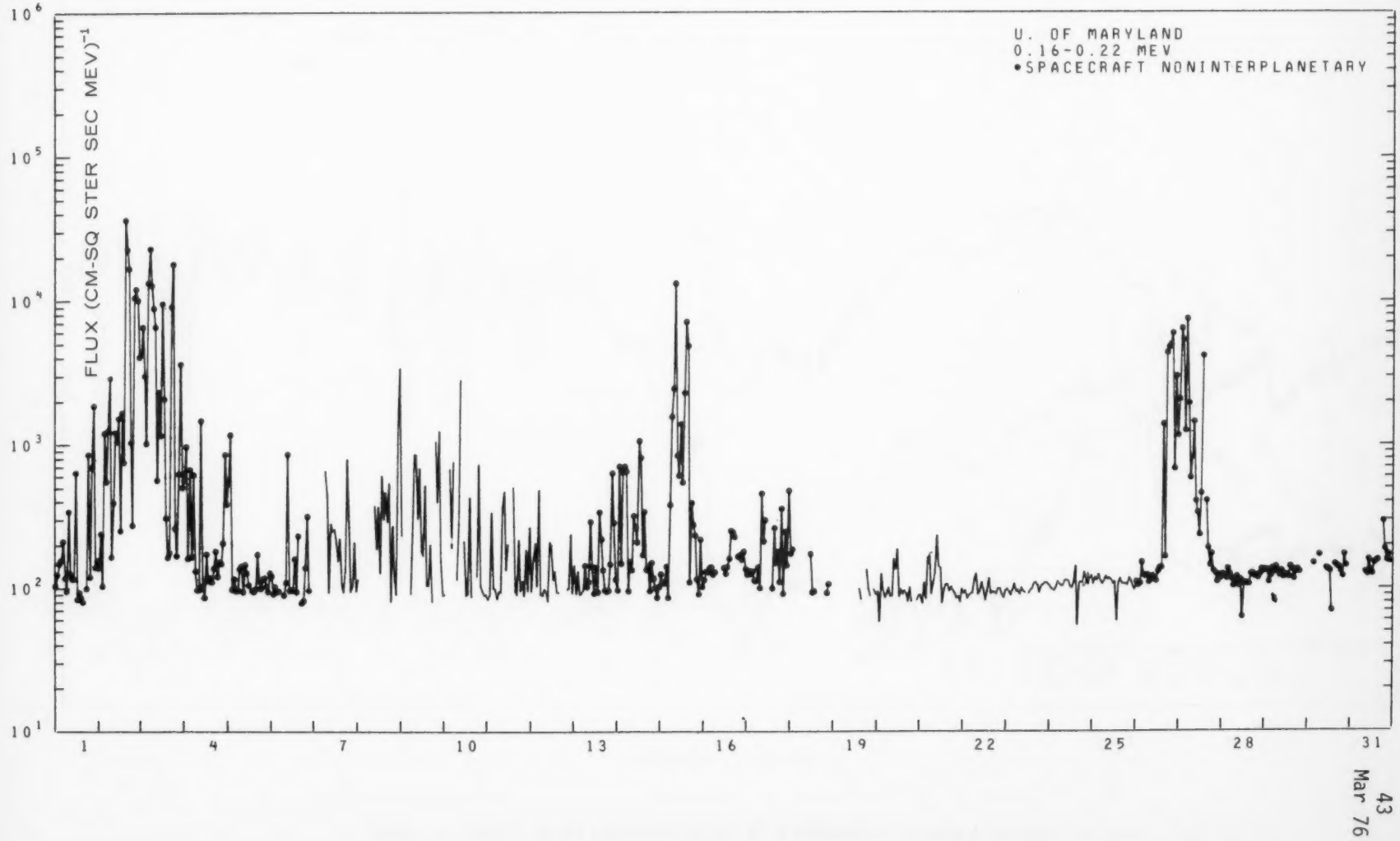
42
Mar 76

MARCH 1976



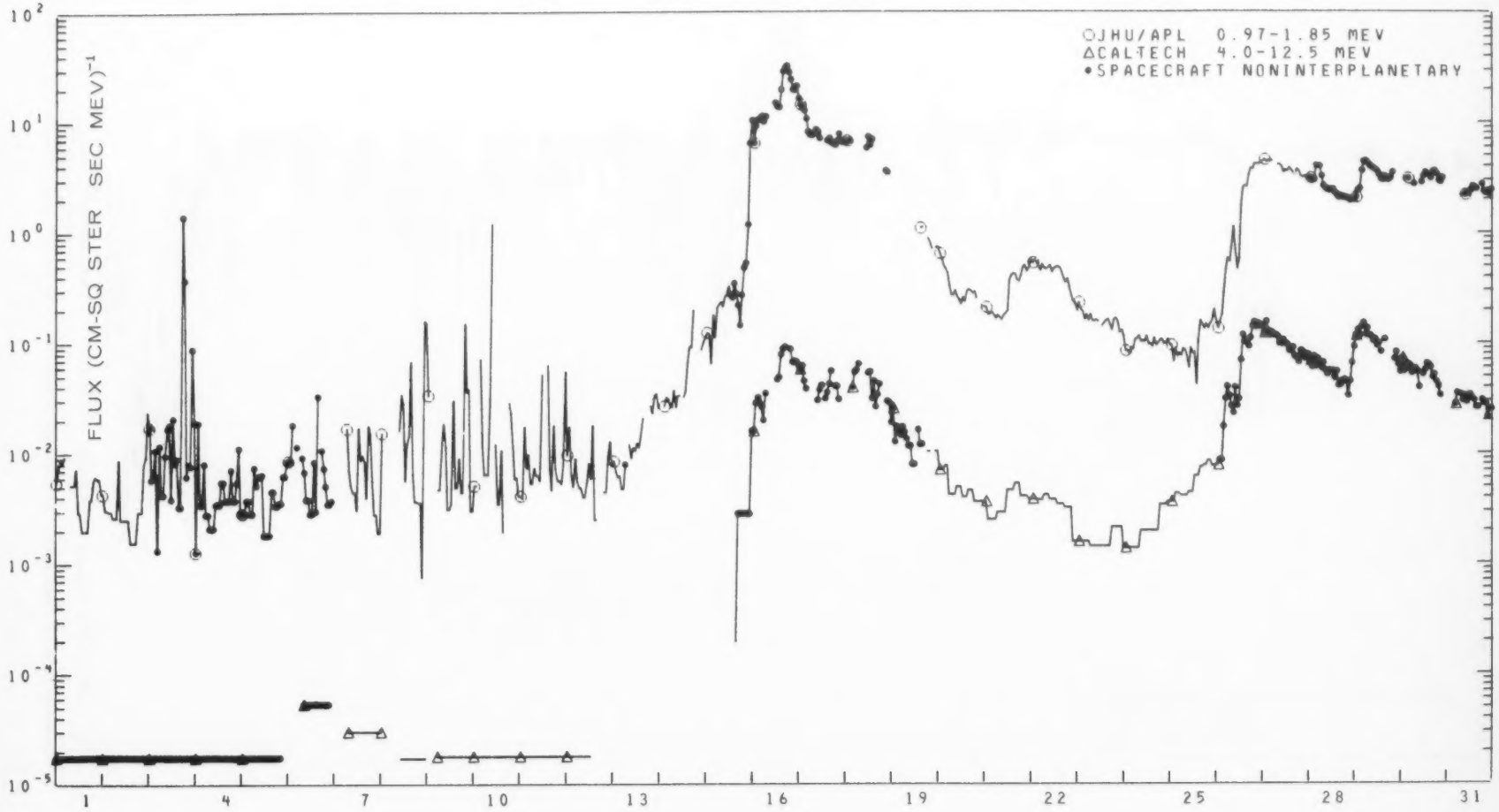
IMP 7 AND 8 LOW ENERGY PROTONS

MARCH 1976



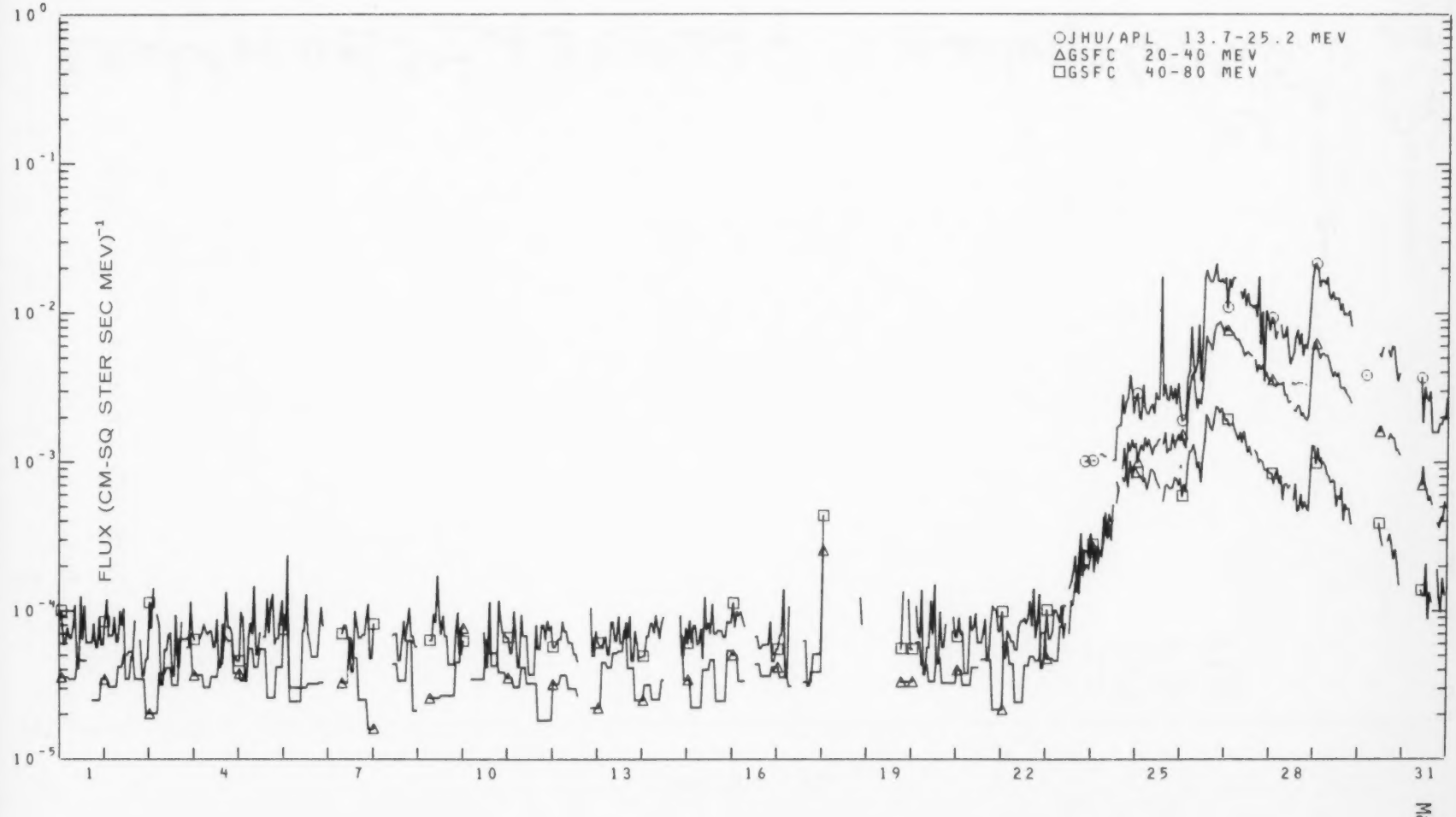
IMP 7 AND 8 INTERMEDIATE ENERGY PROTONS

MARCH 1976



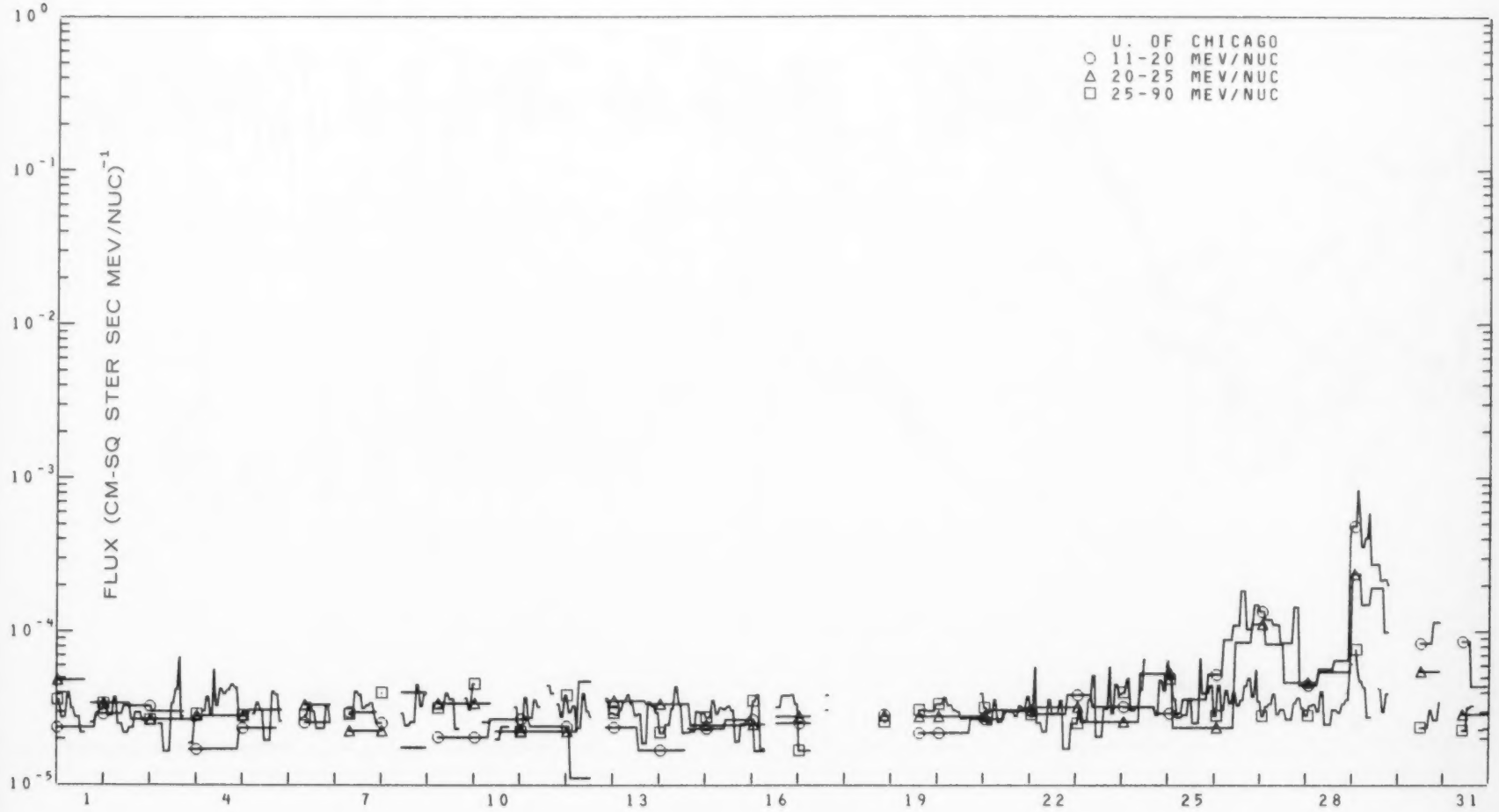
IMP 7 AND 8 HIGH ENERGY PROTONS

MARCH 1976



IMP 7 AND 8 ALPHA PARTICLES

MARCH 1976



SGD 385 Part II (Comprehensive)

FEBRUARY 1976 DATA

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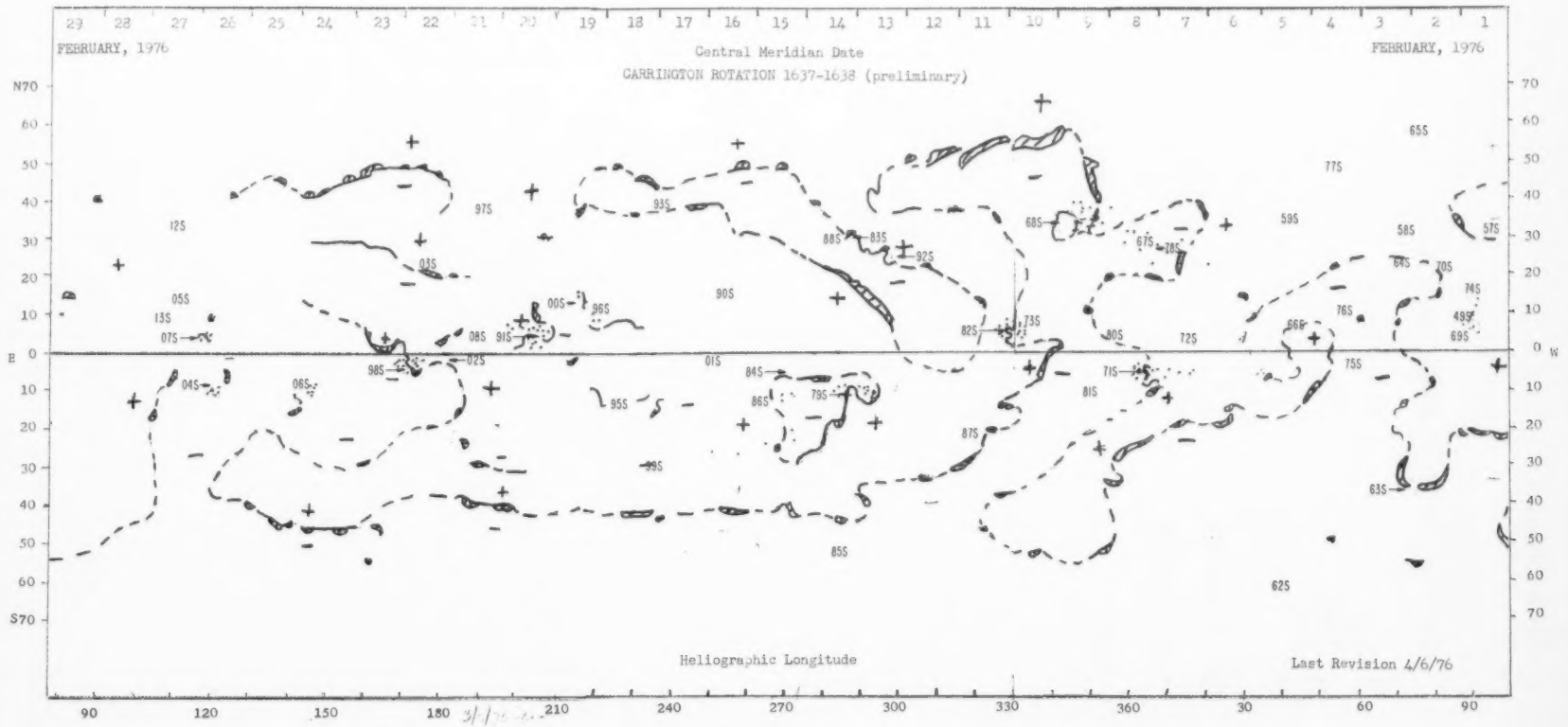
Regional Flare Index	56

ABBREVIATED CALENDAR RECORD

Hα SYNOPTIC CHART

FEBRUARY 1976



ABBREVIATED CALENDAR RECORD

Feb. 1, 1976

		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
FLARES																										
Bursts	cm																									
	dm																									
	m																									
	Dkm																									
SID																										
X-Rays																										
Ap 23	Kp	4o				4-				3-			4-				4o				3+				4o			4+
	sc																									
Aurora	USSR	ϕ = 59° 1800-2000 (HA1)																								
	W.E.																									
Cosmic Rays																										

Green Corona: E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW-

Indices: Rz: 0 10.cm flux: 71 Flare: 1/17.9 Ca: no data Ip: 0 Ia: 5

Solar Regions: (14057) N31 (14074) N16 14049 N08 N07

Sunspots

Feb. 2, 1976

		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
FLARES																										
Bursts	cm																									
	dm																									
	m																									
	Dkm																									
SID																										
X-Rays																										
Ap 20	Kp	4-				3o				3o			2+				3+				5-				4o			3o
	sc																									
Aurora	USSR	ϕ = 60° 1100-1400 and 1800-1900 (HA1); ϕ = 59° 1700 (HA1); ϕ = 49° 1900-2300 (HB1).																								
	W.E.																									
Cosmic Rays																										

Green Corona: E. Limb 7 days earlier: NE- SE W. Limb 7 days later: NW- no data SW- no data

Indices: Rz: 0 10.cm flux: 71 Flare: 1/22.2 Ca: 0.7 Ip: 0 Ia: 5

Solar Regions: (14069) N03 (14070) N21 (14065) N57

Sunspots

Feb. 3, 1976

		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
FLARES																										
Bursts	cm																									
	dm																									
	m																									
	Dkm																									
SID																										
X-Rays																										
Ap 16	Kp	4-				2+				4o			3+				3-				2+				3-			3o
	sc																									
Aurora	USSR	ϕ = 59° 0800-1000 (HA 1-2), 1800-1900 (R_3B2); ϕ = 60° 1100-1200 (HA1)																								
	W.E.																									
Cosmic Rays																										

Green Corona: E. Limb 7 days earlier: NE- no data SE- no data W. Limb 7 days later: NW- no data 300° SW- no data 220°

Indices: Rz: 0 10.cm flux: 70 Flare: 0/23.0 Ca: 0.2 Ip: 0 Ia: 5

Solar Regions: (14058) N30 (14063) S36 (14064) N23

Sunspots

Feb. 4, 1976

		00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
FLARES																										
Bursts	cm																									
	dm																									
	m																									
	Dkm																									
SID																										
X-Rays																										
Ap 12Q	Kp	3+				2o				2o			2+				2+				3o				3o			3+
	sc																									
Aurora	USSR	ϕ = 59° 0000 (HB1), 1500 (R,B2)																								
	W.E.																									
Cosmic Rays																										

Green Corona: E. Limb 7 days earlier: NE- SE W. Limb 7 days later: NW- SW-

Indices: Rz: 0 10.cm flux: 70 Flare: 0/19.1 Ca: 0.6 Ip: 1 Ia: 3

Solar Regions: (14075) S04 (14076) N10 (14077) N48

Sunspots

Feb. 5, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm, dm, m, Dkm

SID

X-Rays

Ap 80 — Kp: 2- | 2- | 1- | 2o | 2+ | 3- | 2o | 3+

Aurora — USSR, W.E.

Cosmic Rays

Green Corona Indices: E. Limb 7 days earlier: NE- no data; SE- no data; W. Limb 7 days later: NW-; SW-

Rz: 0; 10cm flux: 70; Flare: 0/23.1; Ca: no data; Ip: 2; Ia: 4

Solar Regions: (14066) N05; (14059) N34; (14062) S62

Sunspots

Feb. 6, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm, dm, m, Dkm

SID

X-Rays

Ap 80 — Kp: 3+ | 3- | 2+ | 1+ | 1o | 2- | 1+ | 2o

Aurora — USSR, W.E.

Cosmic Rays

Green Corona Indices: E. Limb 7 days earlier: NE-; SE; W. Limb 7 days later: NW- no data 275°-355°; SW-

Rz: 0; 10cm flux: 70; Flare: 0/23.4; Ca: 1.0; Ip: 0; Ia: 0

Solar Regions

Sunspots

Feb. 7, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm, dm, m, Dkm

SID

X-Rays

Ap 21 — Kp: 2- | 2o | 1- | 5o | 4+ | 4o | 4o | 3+

Aurora — USSR: ♀ = 54° 1400-1600 (R:R2); W.E.

Cosmic Rays

Green Corona Indices: E. Limb 7 days earlier: NE-; SE-; W. Limb 7 days later: NW- no data; SW- no data

Rz: 0; 10cm flux: 71; Flare: 0/23.4; Ca: 1.5; Ip: 0; Ia: 2

Solar Regions: (14072) N03

Sunspots

Feb. 8, 1975 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm, dm, m, Dkm

SID

X-Rays

Ap 290 — Kp: 4+ | 3- | 3+ | 4+ | 5- | 5o | 4o | 4o

Aurora — USSR: ♀ = 57° 1600-1900 (HB2), 1800-1900 (HA 1-2); ♀ = 59° 1000-1100 (R:A2), 1200-1700 (HA1); W.E.

Cosmic Rays

Green Corona Indices: E. Limb 7 days earlier: NE-; SE; W. Limb 7 days later: NW-; SW-

Rz: 0; 10cm flux: 70; Flare: 0/22.6; Ca: 1.8; Ip: 0; Ia: 6

Solar Regions: 14078 N27; (14067) N28; 14071 S05; (14080) N04

Sunspots

Feb. 9, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm; dm; m; Dkm

SID

X-Rays

Ap 24 — Kp: 4+ | 4- | 3+ | 4- | 4- | 3+ | 4- | 4+

sc

Aurora — USSR: φ = 60° 1000-1300 (HA1); φ = 59° 1300-1700 (HA1) and 2100 (R1B2)

W.E.

Cosmic Rays

Green Corona — E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- no data 350° SW-

Indices — Rz: 0 10cm flux: 70 Flare: 0/19.2 Ca: 2.8 Ip: 0 Ia: 6

Solar Regions — 14081 S11 14068 N34 (2)

Sunspots

Feb. 10, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm; dm; m; Dkm

SID

X-Rays

Ap 24D — Kp: 4+ | 3+ | 4- | 3+ | 3+ | 3+ | 5o | 4-

sc

Aurora — USSR

W.E.

Cosmic Rays

Green Corona — E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW-

Indices — Rz: 0 10cm flux: 70 Flare: 2/21.2 Ca: 1.2 Ip: 0 Ia: 6

Solar Regions — (14073) N06 14082 N05

Sunspots

Feb. 11, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm; dm; m; Dkm

SID

X-Rays

Ap 12Q — Kp: 2o | 2- | 2+ | 3o | 3o | 2o | 2+ | 4+

sc

Aurora — USSR

W.E.

Cosmic Rays

Green Corona — E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW-

Indices — Rz: 0 10cm flux: 70 Flare: 0/21.5 Ca: 1.1 Ip: 0 Ia: 4

Solar Regions — (14087) S23

Sunspots

Feb. 12, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES

Bursts: cm; dm; m; Dkm

SID

X-Rays

Ap 17 — Kp: 3o | 3+ | 3+ | 2+ | 2+ | 3+ | 3o | 4+

sc

Aurora — USSR: φ = 57 0000-0200 (R1B1); φ = 59 1400-1600 (R1B2)

W.E.

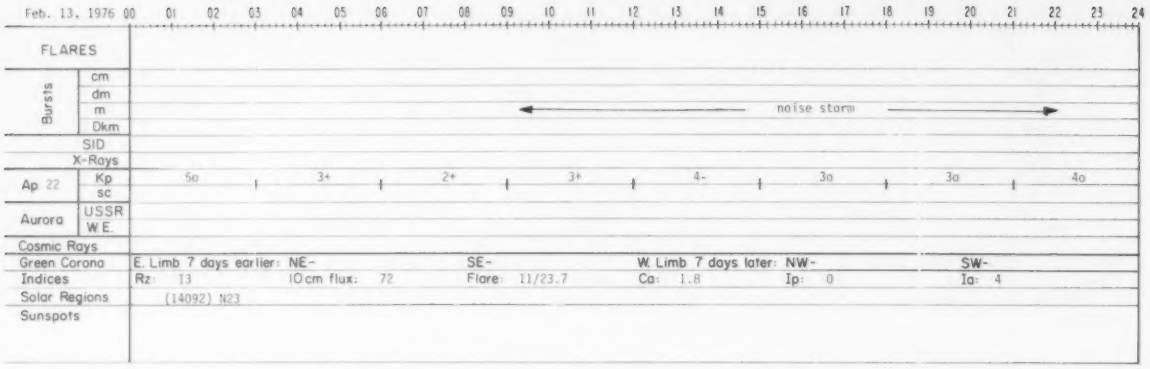
Cosmic Rays

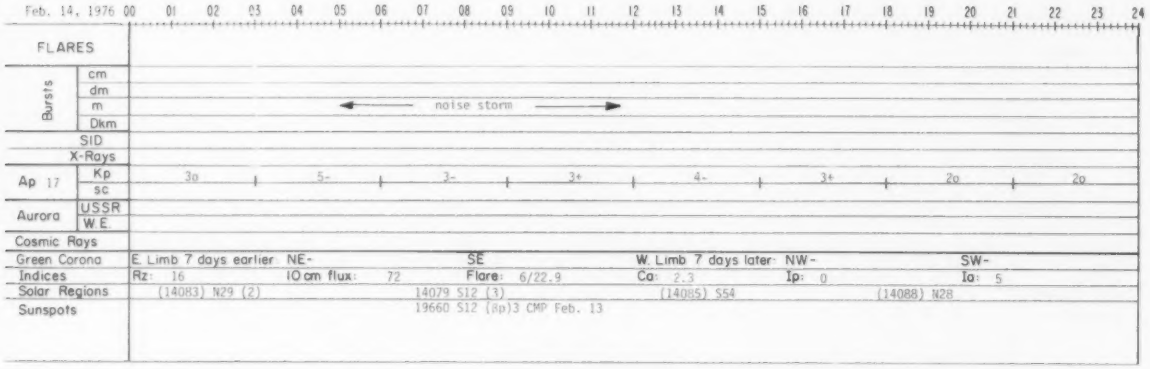
Green Corona — E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW-

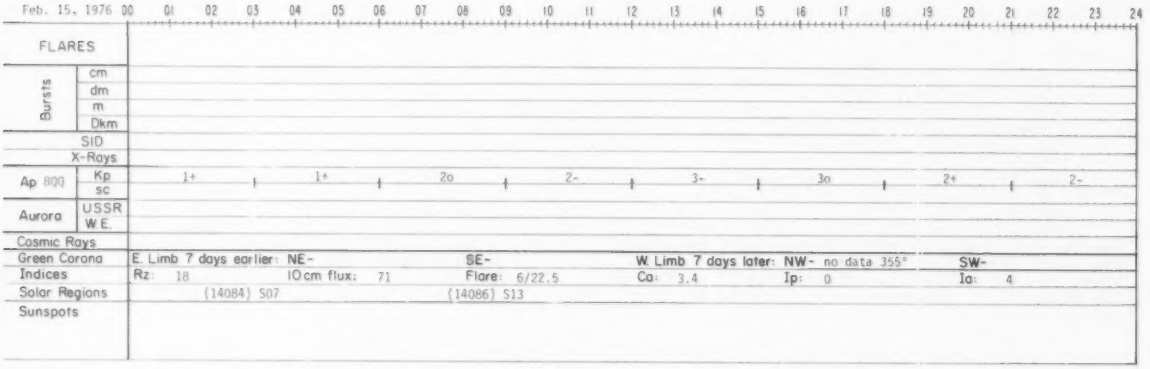
Indices — Rz: 0 10cm flux: 70 Flare: 6/21.3 Ca: 1.3 Ip: 0 Ia: 2

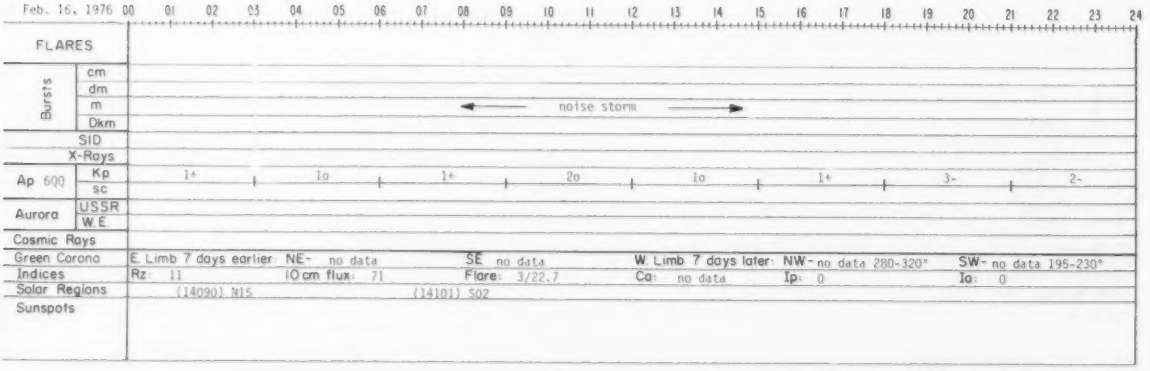
Solar Regions

Sunspots


Feb. 13, 1976
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 22
Kp
sc
5o 3+ 2+ 3+ 4- 3o 3o 4o
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW-
Indices
Rz: 13 10cm flux: 72 Flare: 11/23.7 Ca: 1.8 Ip: 0 Ia: 4
Solar Regions
(14092) N23
Sunspots


Feb. 14, 1976
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 17
Kp
sc
3o 5- 3- 3+ 4- 3+ 2o 2o
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE W. Limb 7 days later: NW- SW-
Indices
Rz: 16 10cm flux: 72 Flare: 6/22.9 Ca: 2.3 Ip: 0 Ia: 5
Solar Regions
(14083) N29 (2) 14079 S12 (3) (14085) S54 (14088) N28
Sunspots
19660 S12 (Bp)3 CMP Feb. 13


Feb. 15, 1976
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
SID
X-Rays
Ap 800
Kp
sc
1+ 1+ 2o 2- 3- 3o 2+ 2-
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- no data 355° SW-
Indices
Rz: 18 10cm flux: 71 Flare: 6/22.5 Ca: 3.4 Ip: 0 Ia: 4
Solar Regions
(14084) S07 (14086) S13
Sunspots


Feb. 16, 1976
00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
noise storm
SID
X-Rays
Ap 600
Kp
sc
1+ 1o 1+ 2o 1o 1+ 3- 2-
Aurora
USSR
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- no data SE no data W. Limb 7 days later: NW- no data 280-320° SW- no data 195-230°
Indices
Rz: 11 10cm flux: 71 Flare: 3/22.7 Ca: no data Ip: 0 Ia: 0
Solar Regions
(14090) N15 (14101) S02
Sunspots

Feb. 17, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES		
Bursts	cm	
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 14	Kp	1+ 2o 2o 2+ 3- 3+ 3+ 4+
	sc	
Aurora	USSR	
	W.E.	
Cosmic Rays		
Green Corona		E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW-
Indices		Rz: 8 10cm flux: 72 Flare: 2/21.7 Ca: 2.4 Ip: 0 Ia: 2
Solar Regions		(14093) N38
Sunspots		

Feb. 18, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES		
Bursts	cm	
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 22	Kp	5- 4- 4o 4- 3+ 2+ 2+ 4o
	sc	
Aurora	USSR	
	W.E.	
Cosmic Rays		
Green Corona		E. Limb 7 days earlier: NE- SE W. Limb 7 days later: NW- SW-no data 230°, 235°
Indices		Rz: 15 10cm flux: 72 Flare: 0/23.4 Ca: 2.8 Ip: 0 Ia: 4
Solar Regions		(14099) S30 (14095) S13
Sunspots		

Feb 19, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES		
Bursts	cm	
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 25D	Kp	3+ 4- 4o 3+ 4o 4o 4o 4+
	sc	
Aurora	USSR	♀ = 59° 1400-1900 (SB2)
	W.E.	
Cosmic Rays		
Green Corona		E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW-
Indices		Rz: 10 10cm flux: 72 Flare: 0/20.3 Ca: 2.9 Ip: 0 Ia: 6
Solar Regions		(14096) N11 (14100) N14
Sunspots		

Feb. 20, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES		
Bursts	cm	
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 19	Kp	3+ 3o 4o 4o 3+ 4- 2+ 3+
	sc	
Aurora	USSR	♀ = 60° 1300-1400 (HB1)
	W.E.	
Cosmic Rays		
Green Corona		E. Limb 7 days earlier: NE- SE W. Limb 7 days later: NW- SW-
Indices		Rz: 12 10cm flux: 72 Flare: 10/23.7 Ca: 2.5 Ip: 0 Ia: 4
Solar Regions		14091 N04 (2)
Sunspots		

Feb. 21, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES		
Bursts	cm	
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 14	Kp	3+ 3o 2+ 4- 2+ 3o 3o 3-
	sc	
Aurora	USSR	ϕ = 59° 2000-2100 (HA2)
	W.E.	
Cosmic Rays		
Green Corona		E. Limb 7 days earlier: NE- no data SE- no data W. Limb 7 days later: NW- no data SW- no data
Indices		Rz: 8 10cm flux: 70 Flare: 5/23.7 Ca: no data Ip: 0 Ia: 6
Solar Regions		(14097) N26 (14108) N03
Sunspots		

Feb. 22, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES		
Bursts	cm	
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 14	Kp	4- 3+ 2+ 3+ 3o 2o 3- 2o
	sc	
Aurora	USSR	ϕ = 59° 1400-1500 (HB1) and 1900 (HA1)
	W.E.	
Cosmic Rays		
Green Corona		E. Limb 7 days earlier: NE- SE W. Limb 7 days later: NW- SW-
Indices		Rz: 7 10cm flux: 70 Flare: 0/22.4 Ca: 3.4 Ip: 0 Ia: 1
Solar Regions		(14102) S02 (14103) N33 14098 S03 (2)
Sunspots		19661 S03 (βp)3

Feb. 23, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES		
Bursts	cm	
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 400	Kp	2o 2o 1+ 1+ 2- 1- 0o 0o
	sc	
Aurora	USSR	
	W.E.	
Cosmic Rays		
Green Corona		E. Limb 7 days earlier: NE- SE- W. Limb 7 days later: NW- SW- no data 270°
Indices		Rz: 0 10cm flux: 71 Flare: 0/23.8 Ca: 2.2 Ip: 0 Ia: 3
Solar Regions		
Sunspots		

Feb. 24, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES		
Bursts	cm	
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 300	Kp	0+ 0+ 1- 1o 1o 1- 1- 0+
	sc	
Aurora	USSR	
	W.E.	
Cosmic Rays		
Green Corona		E. Limb 7 days earlier: NE- SE W. Limb 7 days later: NW- SW-
Indices		Rz: 7 10cm flux: 71 Flare: 0/23.4 Ca: 2.0 Ip: 0 Ia: 5
Solar Regions		
Sunspots		

Feb. 25, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES		
Bursts	cm	
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 400	Kp	1o | 2- | 1+ | 1+ | 0+ | 1+ | 1+ | 0+
	sc	
Aurora	USSR	
	W.E.	
Cosmic Rays		
Green Corona	E. Limb 7 days earlier: NE-	SE- W. Limb 7 days later: NW- SW-
Indices	Rz: 0	10cm flux: 70 Flare: 6/20.9 Ca: 1.1 Ip: 0 Ia: 3
Solar Regions	(14106) S09	
Sunspots		

Feb. 26, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

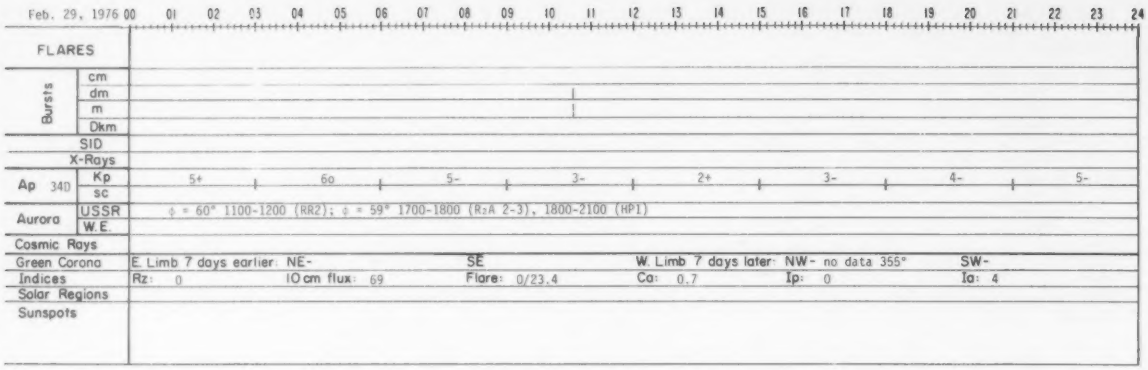
FLARES		
Bursts	cm	
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 90	Kp	1o | 2- | 2+ | 2+ | 3- | 2- | 2- | 3+
	sc	
Aurora	USSR	
	W.E.	
Cosmic Rays		
Green Corona	E. Limb 7 days earlier: NE-	SE W. Limb 7 days later: NW- SW-
Indices	Rz: 0	10cm flux: 70 Flare: 2/22.7 Ca: 0.7 Ip: 0 Ia: 4
Solar Regions	(14104) S09	
Sunspots	(19662) S08 (αp)2	

Feb. 27, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES		
Bursts	cm	
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 260	Kp	3o | 2+ | 2+ | 3o | 5- | 5o | 4+ | 5-
	sc	
Aurora	USSR	φ = 60° 1500-1600 and 2200 (R_1B2), 2300 (R_1A); φ = 59° 1700-1900 (HA2), 2000 (R_1A2), 2100 (R_2R1)
	W.E.	
Cosmic Rays		
Green Corona	E. Limb 7 days earlier: NE-	SE- W. Limb 7 days later: NW- SW-
Indices	Rz: 7	10cm flux: 70 Flare: 0/23.5 Ca: 0.8 Ip: 0 Ia: 3
Solar Regions	(14107) N04 (14105) N14 (14112) N33 (14113) N08	
Sunspots		

Feb. 28, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24

FLARES		
Bursts	cm	
	dm	
	m	
	Dkm	
SID		
X-Rays		
Ap 20	Kp	4- | 3+ | 3+ | 3- | 3o | 4- | 4o | 4o
	sc	
Aurora	USSR	φ = 60° 0000 (HB1); φ = 59° 1300-1400, 1600-2000 (HP1), 1800-1900 (R_1A2)
	W.E.	
Cosmic Rays		
Green Corona	E. Limb 7 days earlier: NE-	SE W. Limb 7 days later: NW- SW-
Indices	Rz: 0	10cm flux: 69 Flare: 0/23.0 Ca: 0.5 Ip: 0 Ia: 5
Solar Regions		
Sunspots		


Feb. 29, 1976 00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
FLARES
Bursts
cm
dm
m
Dkm
SID
X-Rays
Ap 340
Kp
5+ 6o 5- 3- 2+ 3- 4- 5-
sc
Aurora
USSR
♀ = 60° 1100-1200 (RR2); ♀ = 59° 1700-1800 (R₂A 2-3), 1800-2100 (HPI)
W.E.
Cosmic Rays
Green Corona
E. Limb 7 days earlier: NE- SE W. Limb 7 days later: NW- no data 355° SW-
Indices
Rz: 0 10 cm flux: 69 Flare: 0/23.4 Ca: 0.7 Ip: 0 Ia: 4
Solar Regions
Sunspots

REGIONAL FLARE INDEX
INCLUDES ALL FLARES

MC MATH PLAGE NO.	LAT	CMP DATE	DATE FIRST FLARE	DATE LAST FLARE	FLARE-INDEX SUM	FLARE-INDEX MEAN	TOTAL NO. OF FLARES
14049	N 8	76/02/01.7	76/01/28	76/01/29	5.01	2.50	3
14078	N26	76/02/09.1	76/02/10	76/02/10	2.02	2.02	1
14079	S12	76/02/14.1	76/02/12	76/02/17	32.73	5.45	7
14098	S 3	76/02/22.9	76/02/16	76/02/21	15.41	2.57	5
14104	S 8	76/02/26.7	76/02/25	76/02/25	5.75	5.75	1

Note:
Because of differences in method of calculation, the dates of Central Meridian Passage for the McMath Plage Regions vary somewhat from those given elsewhere. Any region not listed here produced no flares during its disk passage.

MISCELLANEOUS DATA

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SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JUNE 1976

JUN 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
01	0000	0730	CULG				0135						IIIB,W,U
	2030	2400	CULG										
02	0000	0730	CULG										
	2030	2400	CULG										
03	0000	0730	CULG										
	2030	2400	CULG										
04	0000	0715	CULG										
	2030	2400	CULG										
05	0000	0730	CULG										
	2030	2145	CULG										
	2353	2400	CULG										
06	0000	0730	CULG										
	2030	2400	CULG										
07	0000	0731	CULG										
	2031	2400	CULG										
08	0000	0731	CULG										
	2031	2400	CULG				2133	2136	1				IIIG
09	0000	0715	CULG										
	2031	2400	CULG										
10	0000	0731	CULG										
	2031	2400	CULG										
11	0000	0732	CULG										
	2032	2400	CULG				2057						IIIB,W,U
			CULG				2204	2205					IIIG,W,U
12	0000	0732	CULG										
	2032	2400	CULG				2249	2250	1				IIIG
13	0000	0732	CULG										
	2032	2400	CULG										
14	0000	0732	CULG										
	2032	2112	CULG										
	2205	2400	CULG										
15	0000	0732	CULG										
	2037	2400	CULG										
16	0000	0732	CULG	0517	0518	1	0517	0518	1				IIIG,U,V
			CULG	0520.5	0521		0520.5	0521					IIIG,W
			CULG				0608						IIIB,W
			CULG	0637	0637.5	1	0637	0637.5	1				IIIG
	2033	2400	CULG										
17	0000	0732	CULG				0150	0300	1				IS
			CULG	0616	0617.5		0616	0617.5					IIIG,W
	2033	2400	CULG	2100	2400	1	2120	2400	1				IS
			CULG	2129	2129.5	1							FAST DRIFT
18			CULG				0000	0733					IIIN,W
	0000	0733	CULG	0000	0733	1	0000	0733	1				IS
			CULG	0314.5	0315	1	0314.5	0315	1				IIIG
	2033	2400	CULG				2033	2400	1				IS
			CULG				2208.5	2209	1				IIIG
19	0000	0733	CULG				0000	0733	1				IS
			CULG				0134	0135	2				IIIG,U
			CULG				0145	0145.5					IIIG,W
			CULG	0539	0630	1							I
	2033	2230	CULG	2117	2230		2117	2230					IS,W

SOLAR RADIO EMISSION
SPECTRAL OBSERVATIONS

JUNE 1976

JUN 1976	TIMES OF OBSERVATION		STATION	EVENTS									SPECTRAL TYPE
				DECIMETRIC BAND			METRIC BAND			DEKAMETRIC BAND			
	START UT	END UT		START UT	END UT	INT	START UT	END UT	INT	START UT	END UT	INT	
19	2256	2400	CULG	2256	2400		2256	2400					IS,W
20	0000	0733	CULG	0000	0436		0000	0733					IS,W
	2030	2400	CULG										
21	0000	0734	CULG										
	2034	2400	CULG										
22	0000	0734	CULG										
	2034	2400	CULG										
23	0000	0734	CULG										
	2034	2400	CULG										
24	0000	0720	CULG										
	2035	2400	CULG	2122	2122.5	1	2122	2123	1				IIIG
			CULG				2124		1				IIIB
			CULG				2344	2345	1				IIIG
			CULG				2350.5	2351	1				IIIG
25	0000	0735	CULG				0023		1				IIIB
			CULG				0132	0133	1				IIIG
			CULG	0413.5		1	0413.5		1				IIIB,U
	2035	2400	CULG										
26	0000	0735	CULG										
	2035	2400	CULG				2156	2157	1				IIIG
27	0000	0735	CULG										
	2035	2400	CULG										
28	0000	0735	CULG				0107		1				IIIB,RS
	2035	2400	CULG										
29	0000	0720	CULG										
	2035	2400	CULG				2120.5	2121	1				IIIG
30	0000	0733	CULG										
	2036	2255	CULG										

SELECTED SOLAR EVENTS

JUNE 1976

Culgoora

UT Date 1976. JUNE	HELIOGRAPH EVENT							Spectral Type	REMARKS
	Start (UT)	End (UT)	Freq. (MHz)	Positions: Central Dist. ($R_\odot$)	Positions: Position Angle (Deg.)	Polarization	Intensity (1-3)		
17/18	2300	0500	160	.6	50	ℓ,r	1	I	Varying polarization, weak type I from this region 17-20
19	0145	0145.5	160	.2	45	0	1	IIIG,W	

Days without Heliograph observations: ..Nil.....

GEOMAGNETIC ACTIVITY INDICES

JUNE 1976

Day	Three-Hourly Indices Kp									Three-Hourly Indices Km								Ap	aa				Cp
		1	2	3	4	5	6	7	8	Sum	1	2	3	4	5	6	7	8		N	S	M		
1		1-	1	2-	1+	2-	1+	3-	2+	13-	1	1	2+	2-	2	2	3-	2+	6	17	15	12	20		0.3
2		2-	2	2+	2-	1+	2+	2-	1	14	2+	2+	3-	2	1	3-	2	1	6	17	10	13	14		0.3
3		2-	2-	1-	1+	2-	2	5-	4-	17+	2	2-	1+	2-	2	2+	4	3	12	28	14	11	32		0.7
4	0	4	5+	3-	3	4-	2-	2	3-	25	4-	4	3-	3-	3+	2-	2	2+	20	36	24	37	25		1.0
5	0	3-	4-	3+	4	4+	3	3-	3+	27	3	3+	3+	4-	4-	3-	2+	3	20	35	32	32	35		1.0
6		2	2	2+	2	2	2	2-	2+	16+	2+	2+	2+	2+	2+	2+	2-	2	7	18	17	17	18		0.4
7		3-	3-	3+	3-	3-	2+	2-	4-	22-	3-	3-	3	2+	3-	2+	1+	3+	13	29	19	24	24		0.7
8		2+	2+	2+	3	1+	2-	2+	2-	17	2+	3-	3-	3	2	2-	2	2	8	19	17	23	15		0.5
9	00	1	2-	1+	1	0+	0+	1	1-	7+	1	1+	2-	1+	0	0	1-	0+	4	12	6	13	5	CC	0.1
10		1-	1+	1	1+	2-	1+	1	3-	11	1	1+	1+	1+	2	1	1	3-	6	16	10	9	17	K	0.2
11	0	4+	5+	4	4-	5-	3	3-	2+	30	4	4+	4-	4+	4+	3	3-	2	26	37	45	47	35		1.2
12		1+	1+	1+	3-	2+	3-	2-	1	14+	1	2-	2-	3-	3-	3-	2-	1	7	16	16	13	19		0.4
13	0	1	2-	2+	0+	1+	0+	0+	1+	9-	1	2-	2+	0+	1+	0+	0	1+	4	12	6	11	8	CK	0.2
14	00	1	1+	0+	0+	0+	0+	1-	1-	5	2-	1+	1-	0+	0+	0+	0+	1-	3	9	4	7	6	CC	0.1
15	0	0+	0	0+	0	0+	1-	2-	3	6+	0+	0+	1-	0+	0+	1-	2-	3-	4	14	5	5	14	CC	0.1
16	0	2-	2	1	2-	0+	1-	1	2-	10	2-	2	1+	2	1-	0+	1-	2-	5	14	7	13	8	C	0.2
17		2-	2	3-	5-	3+	2+	3-	3-	22	2	2+	2+	4-	3+	3	2+	3-	14	26	27	26	27		0.8
18	0	4-	4-	5-	4+	3+	2+	2+	3	27+	3+	4-	4	4+	3	3-	3-	3-	21	34	34	45	23		1.1
19	00	1-	1+	1+	1+	1+	1	1-	1-	8+	1-	1+	2-	2-	1	1	1-	0+	4	12	6	10	9	CK	0.1
20		1+	1	1+	2	2-	2-	1+	1-	11	2-	1	2-	2+	1+	1+	1	1-	5	14	7	11	11	CC	0.2
21	00	0+	1-	1-	1-	1+	1-	2-	0+	6+	1-	0+	1-	1	1+	1-	1+	1-	3	9	4	4	9	CC	0.1
22	00	0+	0+	1	1-	1+	1-	1-	1-	6-	1-	0	1	1	1	0+	1	1-	3	10	5	8	8	CC	0.1
23	0	2	1+	1	1	1	1-	1-	1	9-	2-	1-	1+	1-	1+	1	1-	1	4	13	6	11	9	CC	0.1
24		1-	2-	1+	1+	1	4-	5	5-	19+	1-	2	2	1+	1-	4-	4	4	16	32	19	11	41		0.9
25		4+	3	4-	3-	3-	3+	3+	3-	26-	4	3	4-	3-	2+	3-	3	2+	18	37	26	32	32		1.0
26		2	1	1-	1	1	1	3+	3-	13-	2+	1	1	1	1	1-	4-	3+	7	21	13	12	23		0.4
27		2	2	2+	1+	2	1+	1+	1+	14-	2+	2+	3-	2	2	2-	2-	1+	6	21	13	19	16		0.3
28		2	1	2-	1-	1-	1+	2+	2-	11+	2+	1+	2-	1	1-	1+	2+	2-	5	15	8	10	14	CK	0.2
29	0	1	1+	1+	1+	0+	2	2	1-	10	1+	2-	2-	1+	1-	2-	2	1-	5	16	5	9	12	C	0.2
30	0	2	3-	4+	7-	2+	3	4-	4-	28+	2+	2	4+	6-	3-	3-	3-	3	29	41	37	55	23		1.3
																		Mean	10	21.0	15.3	18.3			0.47

Day	Three-Hourly Indices Kn								Three-Hourly Indices Ks							
	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8
1	1+	1	2	2-	2	2+	3-	2+	1-	1	2+	2-	2	2-	3-	3-
2	2-	2+	3-	2	2-	3-	2-	1	3-	2	2	2-	0+	2+	2	1-
3	2-	2-	1+	2-	3-	3-	4	3	2+	1+	1+	1+	1+	2-	4	3+
4	4	4+	3-	3-	3+	2	2+	3-	4-	4	2+	3-	3+	1+	2-	2
5	3-	4	4-	4-	4-	3-	3-	3+	3	3-	3+	4-	4-	3-	2+	3
6	2	2+	2+	2+	2+	3-	2-	2+	2+	2	2+	3-	3-	2	2-	2-
7	3-	3-	3+	2+	3-	2+	2-	3+	2+	3-	3-	2	3-	2	1+	3
8	2+	3-	3-	3+	2-	2-	2+	2	2	2+	3-	3	2+	2-	2-	2
9	1+	2-	2-	1+	0+	0+	1	1-	0+	1-	2	1+	0	0	0	0
10	1+	2-	2-	2-	2	1	1+	2+	1	1+	1+	1+	2+	1	1-	3-
11	4-	5-	4-	4+	4+	3-	3-	2	4+	4+	4-	4+	5-	3	2+	2+
12	1+	2	2	3	3-	3-	2	1+	1-	1+	1+	3-	3-	2+	2-	0+
13	2-	2	3-	1-	1+	0+	0	2-	0	2-	2	0+	1+	0	0	1+
14	2	2-	1-	1	0+	0+	1-	1+	1	1+	1-	0	0	0	0	0
15	1-	1-	1	0+	1-	1	2-	3-	0	0	0+	0	0	0+	2	3-
16	2-	2-	2-	2+	1	1	1+	2-	2-	2+	1+	2-	0	0	0+	1+
17	2+	3-	3-	4	3+	3	3-	3+	2-	2+	2+	4-	3+	3-	2	2+
18	3+	4-	4	4	3	2+	3-	3-	3	3+	4	4+	3	3-	3-	3-
19	1	2-	2	2	1+	1+	1	1-	0+	1+	1+	1+	1-	1	1-	0
20	2-	1	2	3-	2-	2-	1+	1	2-	1	1+	2-	1	1+	1-	0+
21	1	1	1-	2-	2-	1+	1+	1	1-	0	0+	0	1-	0+	1-	0
22	1+	0+	1	1	1+	1	1+	1	0	0	1	1-	0+	0	1-	0
23	2	1	2-	1+	1+	1	1	1+	1+	0+	1	0	1	1	0+	1-
24	1	2-	2-	2-	1+	4-	4	4	0+	2	2	1	0+	3+	4-	4
25	4-	3-	3+	3-	3-	3-	3-	2	4+	3	4-	2+	2+	2+	3+	3-
26	2+	1+	1+	2-	1+	1	3	3-	3-	1	1	0+	1	1-	4	4-
27	2	2+	3-	2	2+	2-	2-	1+	3-	2+	2+	2-	2-	2-	2	1
28	2+	1+	2-	1+	1	2-	2	2-	2+	1	2	1	1-	0+	2+	1+
29	2-	2	2	2-	1-	2+	2+	1	1+	2-	1+	1+	1-	1	2	1-
30	2+	2+	4+	6-	2+	3-	3	3	2	2-	4+	6-	3-	2+	3-	3

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